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DECLIVE EMPRESARIAL Y DIMENSIONES TEMPORALES EN LOS PROCESOS DE REESTRUCTURACIÓN

(FIRM DECLINE AND TEMPORAL DIMENSIONS IN TURNAROUND PROCESSES)

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“La ciencia se compone de errores, que a su vez son los pasos hacia la verdad”.

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ABSTRACT:

Due to globalization, increasing competitiveness and market volatility, today's businesses are subject to constant threats. Many of these situations lead companies to a prolonged decline that threatens their survival, requiring the implementation of restructuring. The most common model restructuring includes two stages: the retrenchment stage and the recovery stage. In relation to the first stage, the restructuring literature is divided between evidence demonstrating its validity and that which proves its invalidation. Thus, more studies on its validity are necessary.

The literature on organizational change has studied the temporal dimensions of change, and how these are key to its effectiveness. This literature investigates various dimensions of time, such as timing change (early / late), speed (slow / fast) change or the rate of change (regular / irregular). These same dimensions represent a pillar in the traditional literature of restructuring; a pillar which, however, has not been tested. The literature assumes that time is critical to restructuring, especially during the retrenchment stage but there is no empirical evidence of this. Specifically, this literature argues that an early beginning of the process of retrenchment (timing) and a fast process (speed) improves the performance of a company in decline. Finally, there are hardly any references in the literature concerning the rhythm of retrenchment. This thesis will delve into three specific issues related to the temporal dimensions of retrenchment:

1) The relationship between the type of environment (dynamic and munificent) and the three temporal dimensions of retrenchment and the success of the company.

2) The relationship between the degree of firm distress and the speed and rhythm of retrenchment.

3) The concept of aggressiveness is applied to retrenchment actions. According to the literature on competitive dynamics, this concept consists of aggressiveness in time and aggressiveness in volume. We will apply the concept of aggressiveness to the process of retrenchment, and will study the relationship between aggressiveness in time and aggressiveness in volume.

These three topics of study represent a surprisingly critical gap in the literature of restructuring that will quantitatively advance this field.

In the first study, drawing on the downward spiral stream and the threat-rigidity theory, we posit that the positive effects of those time dimensions on turnaround performance are highly contingent to the environment, dynamism and munificence. Our findings, based on a sample of 263 US declining firms, demonstrate that an early timing of retrenchment has a positive effect on performance when the environment is munificent and a negative effect when the environment is dynamic. We also find that a fast pace of retrenchment positively impacts firm performance in dynamic environments. In addition, we observe that declining firms are better off

following an irregular rhythm of retrenchment under both high munificent and high dynamic environments. We discuss the contribution of our research to the downward spiral and threat-rigidity theory literatures.

In the second study the purpose is to shed light on the contradictory view between the change literature and the turnaround literature streams concerning the pace of change. While the change literature has argued and showed evidence that a firm should pace change regularly, the turnaround literature has contended, but not shown evidence, that the pace should be fast. Our research posits that the pace of change is moderated by the level of firm distress. The results in a sample of 84 matched-pair surviving and non-surviving firms show that in situations of high distress declining firm performance improves when companies follow a fast pace of change. However, under situations of low distress firm performance improves if a regular pace of change is followed.

In the third study, we test the effects of retrenchment aggressiveness on turnaround performance. Using the downward spiral, threat rigidity and survivor syndrome perspectives, we hypothesize the direct effects of the two dimensions of aggressiveness, time aggressiveness and volume aggressiveness, on the retrenchment process. We also examine the mediation effect of volume aggressiveness on the relationship between time and turnaround performance. Our results in a sample of matched pair 264 surviving and non-surviving firms show that time aggressiveness has a positive effect on turnaround performance, whereas volume aggressiveness has a

negative effect. We also find that volume aggressiveness partially mediates the relationship between time aggressiveness and turnaround performance. We contribute to the scant but critical literature indicating the importance of time in a turnaround setting and to the long held discussion of retrenchment as a cause of turnaround or a consequence of decline.

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INTRODUCTION

1.1. Background

In recent years, the global economic crisis has caused companies to change the way we compete in an increasingly complex and turbulent environment. This competitive environment has substantially changed during the last decade and more especially for companies based in developed countries. Previously, companies located in these countries were oriented to attain a competitive position through the development of competitive advantages in a constantly growing world.

In these years, the changes experienced in the business environment have led to increased competition, forcing companies to develop capabilities to manage their resources like never before. Globalization and increasing competitiveness in all sectors have brought opportunities and threats, and businesses must learn to face them. The business world has had to change its way of thinking and acting to adapt to these new conditions, to either remain competitive or to simply survive. By definition, the time horizon of any company is indefinite and one of its main objectives is to survive in the environment where it operates. With the crises in recent years there have been many closures and failures of businesses, which has forced companies and their managers to not only know how to manage organizations in times of prosperity and growth, but also to face periods of decline. The actions carried out by the managers then are crucial for the companies' future. Previous research has shown that, at any time, companies may need some restructuring to cope with the process of decline.

During this process, companies mainly carry out strategies which aim to reverse the negative situation that emerges at the beginning of the decline, focusing on certain actions which will allow them to maintain their activity and overcome the situation. This is important because depending on how these strategies are carried out will mean the company's survival or its liquidation.

1.2. Decline and turnaround

Business failure usually comes preceded by a phase of decline in which companies lose their competitive advantage as a result of internal (lack of management skills, internal conflicts) and external factors (economic recession, technological obsolescence, organizational rigidities, etc.) (Pearce II and Robbins, 2008). The decline is generally produced by years of gradual slowdown, but also by a short period of a precipitous drop (Schendel and Patton, 1976).

The concept of restructuring is a phenomenon that occurs when a company suffers from a situation that decreases its financial performance for several years after a period of growth. The restructuring involves the establishment of an explicit or implicit process that carries out a series of strategies to transform the process of decline into periods of growth or profitability.

In the nineties, Pearce II and Robbins (1993) developed a conceptualization of the restructuring process through two stages which has come to be accepted by the literature as a seminal work. Pearce and Robbins' model

describes two stages in the restructuring of the company: the retrenchment stage and the recovery stage. The retrenchment stage seeks the company's survival and the achieving of a positive cash flow in order to stabilize the company to provide financial clearance and consolidate this situation. In the second stage, called the recovery stage, the firm changes its objectives. At this stage the company pursues growth and development through asset purchases, launching new products, entering new markets or a greater penetration of its market at that time.

Pearce II and Robbins (1993) observed that declining firms experience one of the following three results in the years following the turnaround process:

1. Companies liquidated or underperformed. Companies that failed in their attempt to reverse the declining situation of suffering and had to close or maintained underperformed for an extended period.

2. Companies who achieved an improvement in performance, but were never able to regain their pre-crisis level.

3. Companies that recovered and matched or exceeded their more prosperous performance before the crisis periods.

The second and third cases are regarded as a successful turnaround process.

1.3. Retrenchment

As described in the previous section, Pearce II and Robbins (1993) proposed a two-stage model in turnaround processes. During the initial stage of

retrenchment, the firm seeks to eliminate or reduce costs or assets in order to ensure the survival of its business (Lim et al., 2013; Pearce II and Robbins, 1993; Trahms et al., 2013). In the second stage, the stage of recovery, companies seek changes to transform and reposition the company with the objective of growth and profitability (Barker III and Duhaime, 1997; Pearce II and Robbins, 1993; Schmitt and Raisch, 2013).

Our research focuses on the study of the retrenchment stage for two reasons. First, the actions in this stage are critical for businesses in decline, since their goal is survival (Pearce II and Robbins, 1993). Second, since the aim is corporate survival, the retrenchment stage tends to be a period of intense change in which decisions are taken more radically.

There is a set of actions that, in periods of decline, are carried out at the stage of retrenchment. These activities refer to those related to cost or asset reduction (O'Neill, 1986). The cost retrenchment involves reducing the company's costs and is primarily focused on the firm´s bottom line. The asset retrenchment involves reducing the assets of the company and focuses primarily on the firm´s balance. The severity of the financial situation influences the choice of actions that the firm should carry out. Companies under severe situations, such as being in danger of bankruptcy, can manage to achieve stability mainly through the reduction of assets. However, companies in less severe situations simply require tasks such as cost reduction, this being less drastic than reducing assets. Some authors, such as Hambrickand Schecter (1983) and O'Neill (1986), show that reducing costs

and assets is in certain circumstances sufficient to restore the firm's long-term viability.

The causes of the decline of a firm may be due to a contraction in the sector in general or a misalignment of the company to its sector (Cameron et al., 1987). Therefore, to improve the competitive position of a declining firm, it is crucial to decide on the most appropriate strategy and effective recovery (O'Neill, 1986). It must be kept in mind that not all firms in decline have weak competitive positions - even the strongest companies can go into decline due to the contraction in the sector.

The turnaround literature has studied in depth whether retrenchment activities lead to contradictory conclusions (Robbins and Pierce, 1992; Barker and Mone, 1994). On this basis, the literature has opted for a contingent focus (Morrow et al., 2000; Lim et al., 2013). Time is one of the factors which has more potential to advance the study of turnaround and retrenchment. The literature is full of references to the importance of time, yet there is a vacuum of empirical studies on this factor.

1.4. Time Dimensions

The turnaround literature has unanimously recognized that time is a critical variable for the survival of businesses (Arogyaswamy et al., 1995; Hambrick, 1985; Pearce II and Robbins, 1993), and therefore "time is essential for turnaround "(Slatter et al., 2006: pp 9; Whitney, 1987. pp. 120). Time is especially important during the retrenchment stage, the first stage of

turnaround, and actions carried out (Pearce II and Robbins, 1993; Tangpong et al., 2015). The retrenchment stage and the value of the retrenchment activities is a very controversial issue because the empirical support has been inconsistent (Barker and Mone, 1994; Pearce II and Robbins, 1993). The literature has studied contingent factors relating to these activities in order to shed light on these inconsistencies (Lim et al., 2013; Ndofor et al., 2013). Although time is one more of these contingent factors, its importance and impact are vital (Tangpong et al., 2015).

The study of general patterns of change requires a focus on the temporal context (George and Jones, 2000; Pettigrew, 1990). The temporal dimensions of change mainly studied in the literature of change are timing, speed and rhythm (Ancona et al., 2001a; Huy, 2001). These temporal dimensions have been the focus of study in a wide range of areas such as internationalization, mergers and acquisitions, product development, new businesses, etc. (Vermeulen and Barkema, 2002; Bauer and Mätzler, 2014; Atuahene-Gima, 2003; Klarner and Raisch, 2013; Gersick, 1994; Amis et al., 2004; Pacheco-de Almeida et al., 2014). These three temporal dimensions of change are also suggested as critical in the context of turnaround processes (Arogiaswamy, 1995; Pearce II and Robbins, 1993; Hofer, 1980). Here we describe these three temporal dimensions:

a) Timing

Timing is defined as "when something must be done" (Huy, 2001: pp. 604); that is, the moment when an event occurs or is expected to occur or "when

something must be done" (Huy, 2001) marking its beginning. The events represent discrete and discontinuous events that diverge from the routine functions of the organization (Morgeson et al., 2015) and can be studied in isolation or as causing another event in a chain of events (Morgeson et al., 2015). In the context of declining firms in turnaround, timing the time retrenchment entails when the retrenchment process should be initiated. The timing retrenchment process may be early or late. The literature suggests that an early start of the retrenchment stage increases performance and the chances of survival of the company in crisis.

b) Speed

Speed can be defined as the amount of time a firm takes to complete an action or process (Chen and Hambrick, 1995; Vermeulen and Barkema, 2002). Speed has been used to quantify the amount of time spent on a specific action, such as speed of response to a competitor, or on a specific process, such as the speed of strategic renewal (Volberda et al., 2001) or the velocity of internationalization (Vermeulen and Barkema, 2002). This procedural perspective of speed has been used in the literature to define the speed of retrenchment as "longevity process cuts" (Pearce II and Robbins, 1993: 633 pp.). A firm in decline may undergo a process of fast or slow retrenchment. If the process is fast, cost or assets reductions will be very agile and vice versa. The literature suggests that retrenchment processes must be fast (Arogyaswamy et al., 1995; Pearce II and Robbins, 1993).

c) Rhythm

The rhythm is defined as the pattern of variability in the intensity and frequency of change (Amis et al., 2004). The pace of change processes can be irregular, characterized by periods of significant change application, which produce an information overload (peak rate). The rate can also be regular, in which change periods which are uniformly applied, this is, with a similar intensity over time, are combined (Klarner and Raisch, 2013; Vermeulen and Barkema, 2002).

A company which applies an irregular rhythm in the process of retrenchment will implement measures unevenly and with a different intensity during this period (Huy, 2001; Vermeulen and Barkema, 2002). Conversely, a process of regular retrenchment will carry out measures with a uniform intensity during the retrenchment period (Huy, 2001; Vermeulen and Barkema, 2002) intensity. There is almost no mention in the literature about the pace to be followed by a company in decline.

1.5. Contingent factors: environment, financial distress and aggressiveness

Environment

The environment can have a significant impact on the performance of profitable companies (Zahra and Bogner, 2000) and companies in difficulties (Boyne and Meier, 2009; Cameron et al., 1987). As the environment becomes more aggressive, the study of its effects becomes more important. The two most studied dimensions of the environment are dynamism and munificence.

Dynamism represents the rate of change, the degree of unpredictability and turbulence in the environment (Dess and Beard, 1984; Farjoun, 2010). Managers in dynamic environments face a lack of information, unpredictability and uncertainty. A dynamic environment reduces the probability of survival of businesses because businesses have trouble predicting the circumstances that may affect operations. In addition, a fluctuating demand in a dynamic environment increases the difficulty of organizational management (Mellahi and Wilkinson, 2004). Munificence is the degree to which the business environment can support a sustained growth rate (Aragón-Correa and Sharma, 2003). In munificent environments there is an abundance of resources necessary to operate (Castrogiovanni, 1991). Therefore, munificent environments are favorable to companies in crisis.

In turnaround studies the environmental conditions have not been paid the attention required. Very few empirical studies about turnarounds have investigated this issue (Boyne and Meier, 2009 Ndofor et al., 2013). The environmental conditions are important for the results of turnarounds (Zimmerman, 1991).

The downward spiral and threat-rigidity perspectives facilitate arguments that allow us to approach what is the effect of the environment on the relationship of time retrenchment on performance. Finally, the importance of the interactive effect of the environment derives from its relationship with what some authors consider as one of the most contingent factors in the study of success in turnarounds: the causes of decline (Arogyaswamy et al., 1995). The

causes of the decline are divided into internal and external causes (Arogyaswamy et al, 1995; Schmitt and Raisch, 2013; Weitzel and Jonsson, 1989). The internal causes are the causes related to the company leading to a decrease in performance. External causes are the causes connected with the business environment in the broad sense (Arogyaswamy et al., 1995). Success when the business decline is due to external causes is less likely than when it is a result of internal causes (Shein, 2013). This is because survival from external causes requires a change in the environment or a radical change in the firm's strategy (Arogyaswamy et al, 1995). A dynamic environment is a harsh environment, while a munificent environment is a favorable environment. It hence seems necessary for the timing of retrenchment decision processes to suit the type of environment.

Distress

There is a divergence between the literature of change and the turnaround literature on how that change should occur in organizations. The turnaround literature argues, without evidence that changes in the firm in decline must occur quickly, especially during retrenchment processes (Arogyaswamy, 1995; Hofer, 1980). The prospect of a downward spiral described as a decline is a gradual and sustained process of erosion of resources. Therefore, the faster the process of change occurs, the lower the erosion of resources. By contrast, the change literature states that excessive speed change may trigger the organization's collapse (Huy, 2001; Klarner and Raisch, 2013). This literature argues and shows evidence that regular change leads firms to

higher yields. This is because through a regular rate of change companies avoid an information overload and reduce learning diseconomies (Amis et al., 2004, Klarner and Raisch, 2013).

In summary, we found that the two literatures offer opposing views. The aim of our study is to shed light on these different points of view by going more deeply into the speed and pace of change in a turnaround environment. In our research, we postulate that the relationship between company performance and the pace of retrenchment is subject to the firm's degree of deterioration.

It is argued that, in situations of a low level of deterioration, declining firms should follow a regular rhythm of retrenchment as this allows the company to reduce the information overload and increase learning (Amis et al., 2004, Klarner and Raisch, 2013).

However, in situations of a high degree of deterioration, given the imminent risk of failure, a low speed of change is something that the organization cannot afford, given that the downward spiral process will continue to erode the resources of the firm. Since the organization suffers from a high degree of deterioration, further erosion of resources will sink the organization. Therefore, if high levels of deterioration exist, companies will have to act quickly to shorten the period of decline and avoid downtime, which are periods of erosion of resources (Hambrick and D´Aveni, 1988). In this type of situation, the retrenchment must be carried out quickly.

Aggressiveness

The turnaround literature is full of explicit references to the need to introduce aggressiveness in turnaround processes (Hofer, 1980; Pearce II and Robbins, 2008; Pearce II and Robbins, 1992). However, there are no studies on aggressiveness in these processes and thus we do not know how aggressive managers who face a crisis have to behave.

Aggressiveness has been studied in areas such as innovation or competitive dynamics (Smith, et al., 2001; Ferrier, et al., 1999). It is considered that a firm "acts aggressively when it quickly takes a large number of actions" (Chen et al, 2010: pp. 1410). Therefore, aggressiveness is then conceptualized as the direct propensity for actions in terms of the volume and speed of a process of change (Nadkarni et al, 2016; Chen et al, 2010; Ferrier, et al, 1999), such as retrenchment facing decline in a turnaround situation. A firm is therefore said to have a high degree of aggressiveness in a retrenchment process, if it carries out a high degree of retrenchment (volume) or performs this early or quickly (time). Thus, companies in decline can appear aggressive in both volume and time.

The most controversial issue in the turnaround literature is whether the depth in cuts positively affects the firm's performance (Barker and Mone, 1994; Pearce II and Robbins, 1993). This topic will be addressed from the perspective of aggressiveness to study whether aggressiveness in time has to do with the variability of results in aggressiveness in volume. The effects of aggressiveness

in time and in volume on performance will be studied and if the aggressiveness in volume mediates or moderates aggressiveness in time.

1.6. Theoretical framework

Two perspectives are used to argue the effects on a successful turnaround of the temporal dimensions of retrenchment:– the downward spiral (Hambrick and D´Aveni, 1992, 1988) and threat-rigidity (Staw et al 1981). The former focuses on the process of decline and its impact on the firm, and the latter on the firm's response to decline, so that both complement each other. The downward spiral approach is particularly suitable for our research because of its longitudinal nature and the relationship model with the availability of resources and the environment (Hambrick et al., 1988). It postulates that decline is a lengthy process during which a company's resources tend to deteriorate, and declining firms have a substantial period of warning before sinking (Hambrick and D´Aveni, 1988). In the model, the resources of the company have a fundamental role. First, declining firms are more vulnerable in low organizational slack (Hambrick and D´Aveni, 1988). Organizations are accumulators of resources and fail when poor performance erodes them (Levinthal, 1991). The action on resources becomes key to the survival of a company in decline (Levinthal, 1991) and affects its ability to successfully implement change (Barker and Duhaime, 1997). Second, the environment plays a critical role in the survival of a firm in decline given its role as a facilitator of resources (Hambrick and D´Aveni, 1988). The firm will continue to exist as long as the environment remains munificent, because this goodness of

the environment compensates for the erosion of resources caused by the decline. In the final stages of a downward spiral the environment becomes dynamic. Only those companies that have slack resources will be able to survive this change in the environment (Hambrick and D´Aveni, 1988). This change, in combination with low clearance, exhausts all the available forms of resources and marks the demise of the firm.

The prospect of threat-rigidity argues that a threat or a crisis induces managers to rigidity and tightening control (Staw et al., 1981). The process begins when the results of the company fall, causing the management stress and anxiety. The stress of managers mainly produces two organizational responses (Arogyaswamy et al., 1995; Cameron et al., 1987; Staw et al., 1981). First, managers increase the search for information, resulting in an overload. This reduces their ability to process it. Second, managers increase the degree of control and move toward mechanistic structures and decision-making processes of. Finally, Staw et al. (1981) argue that the degree of dysfunctionality of these two responses depends on the conditions in which they occur.

1.7. Methodology, samples and variables

The literature has noted that the selection of an appropriate sample is very important for the study of turnaround. In order to exclude small and medium sized firms, we selected only those firms with more than 500 employees. Also, we selected undiversified firms, having at least 70 percent of their revenues

from their primary three-digit SIC. Financial companies are also not excluded since they introduce bias in the samples.

The methodology, samples and variables used in the different studies are summarize in the following tables:

Table 1

Methodology

	SecondChapter (Paper I)	ThirdChapter (Paper II)	ForthChapter (Paper II)
Data analysis technique	FGLS (Fensible Generalized Least Savers), with pooled-cross section	OLS (logistic regression), with pooled-cross section	OLS (logistic regression), with pooled-cross section
Selection bias	ANOVA	Heckprob procedure	Heckprob procedure
Survival bias	------	Dependent variable and matched-pair	Dependent variable and matched-pair
Others	Reverse code in dependent variables. Robustness check	Robustness check	Reverse code in dependent variables. Robustness check

Table 2

Samples

	SecondChapter (Paper I)	ThirdChapter (Paper II)	ForthChapter (Paper II)
Items	263 (US declining firms in turnaround situation). Implementing retrenchment measures (assets or/and cost)	84 (US declining firms in turnaround situation). Implementing retrenchment measures (assets or/and cost). Firms from Standars and Poor´s 1500 Index	264 (US declining firms in turnaround situation). Implementing retrenchment measures (assets or/and cost)
Period	1979-2007 (expansion and recession periods)	1995-2008 (expansion and recession periods)	1990-2007 (expansion and recession periods)
US SIC Codes	2000-3999	All sectors	2000-3999
BBDD	Compustat	Compustat (financial data), US SEC (Edgar)/ Datastream (Agency factors)	Compustat (financial data), US SEC (Edgar)/ Datastream (Agency factors)

Table 3

Variables

	SecondChapter (Paper I)	ThirdChapter (Paper II)	ForthChapter (Paper II)
Dependent variables	Tobin´s Q (t+3)	Firm survival/success. Turnaround performance (Dichotomic)	Firm survival/success. Turnaround performance (Dichotomic)
Independent and moderating variables	Munificence Dynamism Retrecnhment Timing Speed Rhythm	Speed of retrenchment Rhythm of retrenchment Distress (Altman´s Z)	Time aggressiveness Volume aggressiveness
Control variables	Liquidity Gearing Size (employees) Altman´s Z Intenal causes of decline Times dummies Cyclical dummies	CEO Change Age Industry ROA growth R&D intensity Lambda Times dummies	Altman´s Z Size (employees) Capital intensity Age CEO Change Board size Causes of decline Lambda Times dummies

The data analysis software used was Stata V12.

1.8. Research questions and contributions

The literature has unanimously suggested that temporal dimensions are key to survival and improving the performance of companies in change processes. Temporary dimensions are a complex issue, especially in the critical situations of processing turnaround of a firm in decline. Despite the importance of the subject of study there has been a paucity of empirical testing by the literature concerning processes. Its investigation hence remains very incipient. In general, there are few studies in the management literature that deal comprehensively with different time dimensions. The conjunction of these bodies of literature with each other therefore allows this avenue of research on which this thesis is based, and aims to be a thread of development of the literature.

This dissertation tries to answer two general research questions:

(1) How do the temporal dimensions of retrenchment affect performance, success or survival of businesses in decline when interacting with the environment and the degree of deterioration of the company?

(2) How does aggressiveness in time and volume of the retrenchment performance, affect the success or survival of declining firms?

The objective is, then, to establish models of causal relationships, the direction and magnitude of the effect of temporal dimensions of time, speed and rhythm to improve the performance or the survival of businesses in decline in turnaround, in their interaction with the environment and with the degree of

deterioration of the firm. Also to establish a causal relationship between the two types of aggressiveness (time and volume) and the firm's performance.

In order to answer these questions, three studies were carried out. The first study focuses on examining the relationship of three dimensions of time (timing, speed and rhythm) at the stage of retrenchment with the type of environment, based on the downward spiral and the threat-rigidity perspectives. The three dimensions are highly contingent on the environment in terms of munificence and dynamism. The following are the contributions of the hypotheses:

Hypothesis 1a: ***Environmental dynamism positively moderates the relationship between an early timing of retrenchment and firm performance.***

Hypothesis 1b: ***Environmental munificence positively moderates the relationship between timing of retrenchment and performance.***

Hypothesis 2a: ***Environmental dynamism positively moderates the relationship between speed of retrenchment and firm performance***

Hypothesis 2b: ***Environmental munificence positively moderates the relationship between speed of retrenchment and firm performance.***

Hypothesis 3a1: ***Environmental dynamism positively moderates the relationship between an irregular rhythm of retrenchment and firm performance.***

Hypothesis 3a2: ***Environmental dynamism positively moderates the relationship between a regular rhythm of retrenchment and firm performance.***

Hypothesis 3b: ***Industry munificence positively moderates the relationship between an irregular rhythm of retrenchment and performance.***

The second study analyzes the influence of the right pace of change in retrenchment as moderated by the degree of deterioration of the company. Hypotheses as contribution are:

Hypothesis 4: ***Firm distress will moderate the relationship between speed of change and performance turnarounds so that the greater the level of distress, the more that a fast pace of change increases firm performance.***

Hypothesis 5: ***Firm distress will moderate the relationship between rhythm of change and performance turnarounds so that the lower the level of distress, the more that a regular rhythm of change increases firm performance.***

Finally, our third study defines and tests the concept of retrenchment aggressiveness, in terms of time and volume, to assess the effect on performance in turnaround processes, as well as the mediating effect between the two. The following are the contributions of the hypotheses:

Hypothesis 6: ***Time aggressiveness will be positively related to performance turnarounds.***

Hypothesis 7: ***Retrenchment aggressiveness in volume will be negatively related to performance turnarounds.***

Hypothesis 8: ***Volume aggressiveness mediates the relationship between time aggressiveness and turnaround performance.***

Therefore this project presents 12 hypotheses to answer the two research questions. They link together, having the effect of temporal dimensions in turnaround processes as their cornerstone.

1.9. Structure

This thesis is structured as follows. In Chapter 1, following a global abstract, the introduction summarizes the key aspects that make up the document. The three studies we have described are presented in Chapters 2, 3 and 4. Chapter 2 presents the study entitled "**TEMPORAL DIMENSIONS OF CHANGE AND ENVIRONMENTAL CONDITIONS IN CORPORATE TURNAROUNDS**". The second study entitled **"FIRM DISTRESS AND THE PACE OF TURNAROUND CHANGE**" is in Chapter 3 ". Finally, the study entitled "**SHOULD DECLINING FIRMS BE AGGRESSIVE DURING TNE RETRENCHMENT PROCESS?**" is analyzed in Chapter 4,". Each of these chapters includes different sections: introduction, hypotheses, methodology and conclusions (results, discussion and limitations). Chapter 5 closes the work with a summary and the conclusions, contributions, limitations and future lines of investigation following this work are described. Each chapter has its corresponding references.

SECOND CHAPTER:

TEMPORAL DIMENSIONS OF CHANGE AND ENVIRONMENTAL CONDITIONS IN CORPORATE TURNAROUNDS

2.1. Introduction

Literature has unanimously acknowledged that time is critical to declining firms survival (Arogyaswamy et al., 1995; Hambrick, 1985; Pearce II and Robbins, 1993), and consequently "time is of the essence to turnarounds" (Slatter et al., 2006: pp. 9; Whitney, 1987: pp. 120). Time is especially important to the retrenchment stage, the first turnaround stage, and to the actions carried out in it -hereinafter, retrenchment or retrenchment actions- (Pearce II and Robbins, 1993; Tangpong et al., 2015). The role of retrenchment has remained a highly controversial topic because empirical support has been inconsistent (Barker and Mone, 1994; Pearce II and Robbins, 1993). Literature has studied factors contingent to retrenchment in order to shed light on those inconsistencies (Lim et al., 2013; Ndofor et al., 2013). Time is another one of these contingent factors, however, a vital one (Tangpong et al., 2015).

Time is a complex topic possessing many dimensions such as timing, cycle, speed, rhythm or frequency (Ancona et al., 2001a; Huy, 2001). Decline literature has clearly recognized the importance of two of those dimensions, timing and speed, as essential to turnaround success (Arogyaswamy et al., 1995; Bibeault, 1982; Grinyer et al., 1992; Pearce II and Robbins, 1993). Timing is defined as the moment an event happens or is planned to happen. Speed is defined as the amount of time that a firm spends to complete an action or a process (Chen and Hambrick, 1995; Vermeulen and Barkema, 2002). In relation to retrenchment, literature has assumed as a critical pillar to the literature that an early initiation of retrenchment (i.e.: timing of retrenchment) and a fast pace of retrenchment (i.e.: speed of retrenchment) are

associated to higher firm performance and survival (Arogyaswamy et al., 1995; Bibeault, 1982; Pearce II and Robbins, 1993). The downward spiral stream (Hambrick and D´Aveni, 1992, 1988), a seminal perspective in the turnaround literature, suggests that because decline is a protracted process eroding slack resources, troubled firms should act time aggressively (earlier and faster) to avoid firm collapse. However, we have very limited evidence of whether this is the case for timing of retrenchment (Tangpong et al., 2015) and no evidence for speed of retrenchment. A third important time dimension to retrenchment used in the change literature is rhythm (Klarner and Raisch, 2013; Vermeulen and Barkema, 2002). Rhythm is defined as the pattern of variability in the intensity and frequency of activity (Huy, 2001). Under an irregular rhythm firms execute retrenchment measures unevenly and with a different intensity over the retrenchment period. Literature has remained silent on how important is rhythm to turnaround success or to retrenchment, this is how concentrated in time and intensity should retrenchment be. In summary, the study of time and retrenchment represents a critical but underresearched area in the literature of turnaround (Datta et al., 2010; Pearce II and Robbins, 1993) despite its potential as a critical contingent factor to the controversial study of retrenchment (Tangpong et al., 2015).

The environment, based on the downward slide stream (Hambrick and D´Aveni, 1988) and the threat rigidity theory (Staw et al., 1981), is another critical factor influencing turnaround outcomes. These two seminal

perspectives posit that the environment, munificence, can act as a buffer by providing slack resources (Hambrick and D´Aveni, 1988) or as a trigger to firm demise –low munificence/dynamism- (Hambrick and D´Aveni, 1988; Staw et al., 1981). Given its importance to firm survival/collapse, the environment will likely influence the effects of the temporal dimensions of retrenchment on turnaround performance. This is the performance effects of an early, fast or irregular retrenchment is likely to be moderated by whether the environment is adverse or benevolent. Thus, we study two research questions a) How does an early timing, fast pace or irregular rhythm of retrenchment influence turnaround performance in a munificent – benevolent- environment, which is characterized by providing firms with extra resources? b) How does an early timing, fast pace or irregular rhythm of retrenchment influence turnaround performance in a dynamic – adverse- environment, which is characterized by uncertainty and unpredictability?. In sum, the focus of our research is to study how time aggressive should declining firms be in each type of environment. By studying these questions, our aim is to respond to the call for more empirical research on the critical contingent topic of time on turnaround success (Tangpong et al., 2015) and to validate, as suggested by the downward spiral stream and threat rigidity theory, the influence the environment exerts on time and turnaround.

We select a panel of US declining firms with more than 500 employees operating in the manufacturing industry (US SIC 2000-4000), implementing retrenchment measures between 1979 and 2007. To select this sample and

the information for the study, we use data from the Standard and Poors´ Compustat quarterly files. To test our hypotheses, we choose Tobin´s Q as our dependent variable. This performance measure has previously been used as a proxy for performance in retrenchment studies (Morrow Jr. et al., 2004; Norman et al., 2012), turnaround studies (Chen and Hambrick, 2012; Scott F Latham and Braun, 2009) and timing/speed studies (Pacheco-de-Almeida et al., 2015, 2010). To estimate our panel results, we use the feasible generalized least squares (FGLS) approach (Wooldridge, 2009) which permits to obtain unbiased, consistent, efficient, and asymptotically normal estimators (Kariya and Kurata, 2004).

This study offers a number of contributions to the turnaround literature. First, we provide a temporal framework to analyze retrenchment decisions beyond timing of retrenchment (Tangpong et al., 2015), by extending such to the speed and rhythm of retrenchment. Second, we extend the controversial literature analyzing retrenchment contingencies (Lim et al., 2013; Trahms et al., 2013) to the critical temporal dimensions and the environment. We find that troubled firms should in general be time aggressive in both types of environment however they should be more time aggressive under munificence and less time aggressive under dynamism. Third, we also contribute by extending the downward slide stream and threat-rigidity theory environmental focus to the temporal dimensions of retrenchment.

This paper is organized as follows. We first define the three temporal dimensions of retrenchment. Next, we briefly describe the downward spiral

stream and the threat rigidity theory, as the perspectives used to support our hypotheses. Next, drawing from those two streams, we develop our hypotheses, which posit the moderating effects of the type of environment on the relationship between the temporal dimensions of retrenchment and turnaround performance. Next, we describe our research methods and present the results of the empirical analysis. Finally, we outline the main contributions and implications for theory and practice, and discuss limitations and future research directions.

2.2. Hypotheses

Time dimensions of a turnaround

The study of time has recently sparked a surge in the change management research (Hawk et al., 2013; Klarner and Raisch, 2013; Pacheco-de-Almeida et al., 2015). For some change situations, time has a greater impact than for others given how quickly the firm has to act (Huy, 2001). In the case of turnarounds, traditional literature has consistently and argued and assumed that time is critical (Arogyaswamy et al., 1995; Bibeault, 1982; Pearce II and Robbins, 1993) because it can itself influence the outcomes of a turnaround (Zimmerman, 1991), and if carried out atemporally it may result in the collapse of the firm (Tangpong et al., 2015). Also, time is one of the two critical elements, along with money, to a successful turnaround (Zimmerman, 1991).

There are a few dimensions of interest in the study of time (Ancona et al., 2001b; Huy, 2001). Authors have concentrated attention in three dimensions: timing, speed and rhythm of change (Amis et al., 2004; Gersick, 1994; Huy,

2001; Klarner and Raisch, 2013). First, timing is defined as the moment an event is initiated or is planned to be initiated (Huy, 2001). Events represent discrete discontinuous "happenings" which diverge from the routine features of the organization (Morgeson, Mitchell, & Liu, 2015: pp. 519). Events possess a discontinuous, exceptional, contingent nature. Retrenchment is the focal event of our research[1] and constitutes a non-routine, exceptional event. Finally, timing of retrenchment indicates when is retrenchment initiated, this is, how early does retrenchment start.

Second, speed can be defined as the amount of time that a firm spends to complete an action or a process (Chen and Hambrick, 1995; Vermeulen and Barkema, 2002). Speed has been used to quantify the amount of time employed in a specific action, such as the speed of response to a competitor (Smith et al., 1991), or in a specific process such as the speed of strategic renewal (Volberda et al., 2001) or the speed of internationalization (Vermeulen and Barkema, 2002). This processual perspective of speed has been used in the turnaround literature to define the speed of retrenchment as "the longevity of the retrenchment process" (Pearce II and Robbins, 1993: pp. 633). Declining firms pursue a fast or a slow pace of retrenchment based on whether retrenchment is executed in a short or a long period of time from the moment the turnaround is initiated.

Third, rhythm of change is defined as the pattern of variability in the intensity and frequency of activity (Huy, 2001). A firm following an irregular rhythm of

[1] In the situation of analysis there are actually two salient events: decline and retrenchment. The situation is discussed by Morgeson et al. (2015) when they describe how events can form chains of events that affect organizations across time. In our case an initial event (decline) prompts retrenchment, the focal event of our study.

retrenchment will execute retrenchment measures unevenly and with a different intensity over the retrenchment period (Huy, 2001; Vermeulen and Barkema, 2002). Conversely, firms pacing regularly distribute the intensity of retrenchment evenly over the retrenchment period (Huy, 2001; Vermeulen and Barkema, 2002).

Theoretical framework

To argue the effects on turnaround success of the temporal dimensions of retrenchment and the environment we use two perspectives, the downward spiral stream (Hambrick and D´Aveni, 1992, 1988) and threat-rigidity theory (Staw et al., 1981). The former focuses on the process of decline and its effects on the firm, and the latter on the response to decline by the firm, thus they both complement each other.

The downward spiral is specially appropriate to our research due its longitudinal nature and its focus on the firm availability of resources –slack- and on the environment (Hambrick and D´Aveni, 1988). The stream posits that decline is a protracted process over which firm resources deteriorate and that declining firms have a substantial period of warning before they collapse (Hambrick and D´Aveni, 1988). In the model, firm resources have a fundamental role. First, declining firms are more vulnerable to decline upon conditions of low organizational slack (Hambrick and D´Aveni, 1988). Organizations are accumulators of resources and fail when poor performance erodes these (Levinthal, 1991). The firm stock of resources becomes key in the survival of the declining firm (Levinthal, 1991) and it

affects its capacity to implement a successful turnaround (Barker III and Duhaime, 1997). Second, the environment plays a critical function in their survival given its role as a resource facilitator (Hambrick and D´Aveni, 1988). As long as the environment remains munificent, declining firms will manage to survive despite the resource erosion, creating a form of false encouragement. In the final stages of the downward spiral process, the environment becomes low munificent or dynamic. Only those firms in possession of slack are able to survive this change in the environment (Hambrick and D´Aveni, 1988). This change in the environment, combined with a low level of slack, exhausts all forms of slack and seals the firm demise.

The threat-rigidity perspective argues that a threat or crisis induces managers to rigidity and tightening of control (Staw et al., 1981). The process is initiated when decline results in managerial stress and anxiety. Managerial stress produces two relevant organizational responses (Arogyaswamy et al., 1995; Cameron et al., 1987; Staw et al., 1981). First, managers increase the search for information resulting in information overload, which reduces their ability to process information. Second, managers increase the constriction in control and shift towards mechanistic structures and decision processes. Finally, Staw et al. (1981) argue that, how dysfunctional these two responses are, depends on the conditions under which they occur such as the environment (Staw et al., 1981).

Timing of retrenchment

Turnaround literature has argued and showed evidence that the probabilities of a successful turnaround are higher the earlier the timing of the intervention to reverse decline (Grinyer and Spender, 1988; Grinyer et al., 1992; Tangpong et al., 2015). First, as argued by the downward spiral stream, decline acts as a process of resource and performance erosion (Hambrick and D´Aveni, 1988). Decline depletes internal resources by eroding financial, human and reputational resources, draining firm slack (Hambrick and D´Aveni, 1992, 1988; Sutton et al., 1986). Then, underperformance reduces the availability of external resources by driving off stakeholder support further eroding slack (Gilson et al., 1990; Pajunen, 2006). This internal and external deterioration process accelerates as decline gathers pace (Hambrick and D´Aveni, 1992; Shein, 2013) because decline is a self reinforcing process (Hambrick and D´Aveni, 1988). However, the availability of slack internal resources and of stakeholder support are necessary for a successful turnaround (Arogyaswamy et al., 1995; Whetten, 1987) and a successful retrenchment (Love and Nohria, 2005).

Second, the threat-rigidity theory describes how decline inflicts stress on managers (Staw et al., 1981). Research shows evidence that stress has a curvilinear relationship (U-shaped) to performance (Rudolph and Repenning, 2002). Based on this shape, a moderate amount of stress can be positive for the firm. However, excessive levels of stress are negatively related to performance. A situation of intense decline will generate extreme levels of

stress driving the firm to intense underperformance (Staw et al., 1981; D. a. Whetten, 1980), thus firms should avoid extended periods of decline.

An early timing of retrenchment, by halting an extended period of downward spiral, will prevent the depletion of slack resources (Grinyer et al., 1992; Tangpong et al., 2015) and the reach of excessive levels of stress derived from a threat-rigidity situation.

Timing of retrenchment and the environment

Dynamism represents the rate of change and the degree of unpredictability and turbulence in the environment (Dess and Beard, 1984; Farjoun, 2010). As the environment becomes more dynamic, an early timing of retrenchment becomes more important. First, turbulent environments aggravate the ability to predict the future because there is an absence of patterns, and prediction of competitors´ actions or developments within the industry becomes difficult (Dess and Beard, 1984; Sirmon et al., 2007). Literature proposes a number of alternatives to counter dynamism such as introducing flexibility, experimenting, managing the firm as a portfolio of real options or simply to build and use strong processing power (Farjoun and Levin, 2011; Morrow Jr. et al., 2007; Siggelkow and Rivkin, 2005). All of these alternatives require slack resources to operate (Cyert and March, 1963; Love and Nohria, 2005; Meyer, 1982; Siggelkow and Rivkin, 2005; Simsek et al., 2007). For example, experimentation is a process characterized by trial and error whose objective is to increase the chances that the modifications introduced are of the right type (Cooper et al., 1994; Muehlfeld et al., 2012). Trial and error processes are

resource intense processes given iterations consume abundant resources (Cooper et al., 1994). An early timing of retrenchment will avoid the resource erosion derived from a downward spiral, and will allow the conservation of resources required to operate under conditions of dynamism.

Second, we argued earlier that, based on the threat-rigidity theory, a process of intense decline generates decline-induced stress (D´Aveni and MacMillan, 1990; Staw et al., 1981; D. a. Whetten, 1980), resulting in underperformance (Rudolph and Repenning, 2002) . Dynamism represents an added source of firm stress as executives of firms operating in turbulent environments are likely to suffer stress and anxiety derived from an unpredictable environment (Cameron et al., 1987; Waldman et al., 2001). A situation that combines both, decline and dynamism, may generate extreme levels of stress driving the firm to intense underperformance. Early retrenchment will curtail excessive levels of stress. Third, also based on the threat-rigidity theory, firms respond to decline by shifting to a mechanistic structure (Staw et al., 1981). However, studies have shown extensive evidence that, as the environment becomes more dynamic, organic structures are preferred because mechanistic structures are adverse to dynamic environments (Cameron et al., 1987; Davis et al., 2009; Sutton and D´Aunno, 1989).

Based on the above reasoning, we expect an early timing of retrenchment to be advantageous to declining firms under conditions of high dynamism. Early retrenchment will halt the downward spiral period, conserving resources required to operate under dynamism. It will also avoid an extreme threat-

rigidity situation, avoiding excessive levels of executive stress and a shift to mechanistic structures. Thus, we can argue:

Hypothesis 1a: Environmental dynamism positively moderates the relationship between an early timing of retrenchment and firm performance.

Munificence is the degree to which the general business environment can support a sustained rate of growth (Aragon-Correa and Sharma, 2003; Miller et al., 1982). An early timing of retrenchment becomes more important as the environment becomes more munificent. First, a munificent environment has been described as an environment rich in opportunities (Dess and Origer, 1987; Keats and Hitt, 1988), able to support high sales growth (Aragon-Correa and Sharma, 2003; Dess and Beard, 1984) and to provide declining firms with extra revenues (Boyne and Meier, 2009; Sheppard, 1995). One consequence of the increasing demand is that customers may be willing to pay premiums for products or services (Aragon-Correa and Sharma, 2003). In such an environment rich in opportunities, declining firms delaying retrenchment will allow the downward spiral to further erode their internal resources and will possess fewer resources available to pursue those opportunities offered by a munificent environment. By lagging action, declining firms will have less external resources available to take advantage of a munificence environment.

Second, a situation of decline can originate from internal and from external causes (John Argenti, 1976; Cameron et al., 1988; Davis, 1952; Trahms et al.,

2013). External causes are environmentally related causes producing a firm´s decline (Arogyaswamy et al., 1995) and include economic downturns and industry-specific conditions such as changes in technology or competition (Balcaen and Ooghe, 2006; Slatter, 1984; Trahms et al., 2013). An important implication is "external forces will be more difficult to change, and therefore a company struggling with external causes of distress-all things being equal-present a less attractive candidate …" (Shein, 2013: pp. 267). The options the firm will have are to wait for a change in the environment or to change the firm strategic orientation (Arogyaswamy et al., 1995), which are long-term solutions. Internal causes are firm-related causes leading to a firm´s decline. Literature agrees they are managerial in nature. The most common internal cause is ineffective management[2](John Argenti, 1976; Bruno and Leidecker, 1988; Trahms et al., 2013), which includes a lack of management depth, an unbalanced TMT or a weak finance function (John Argenti, 1976; Shein, 2013; Slatter, 1984). Internal problems (causes) "are easier to resolve than external problems" (Hopkins and Hopkins, 2006: pp. 9) because they are inflicted by the firm itself and solving the situation rests on the firm itself (Hopkins and Hopkins, 2006; Shein, 2013).

If the source of decline is generated by the firm itself, the firm will have full control over the initiation of the turnaround and of the retrenchment process and does not need to wait to a change in the environmental conditions.

[2] Some studies have estimated the percentage of failures in which ineffective management is the main reason and it can be as high as 85% (Bibeault, 1982; Bruno and Leidecker, 1988).

Turnaround literature posits that given a high munificence represents a benevolent environment, it indicates the firm is less affected by external environmental causes and more affected by internal causes (Arogyaswamy et al., 1995; Ndofor et al., 2013). Therefore, in a munificent environment the firm will be able to halt the downward slide process earlier, avoiding excessive resource deterioration and extreme levels of managerial stress.

Thus, we can hypothesize:

Hypothesis 1b: Environmental munificence positively moderates the relationship between timing of retrenchment and performance.

Speed of retrenchment

Literature has consistently suggested that turnarounds require a fast pace of action (Bibeault, 1982; Choe and Roehl, 2007; Dowell et al., 2011; Pearce II and Robbins, 1993; Slatter et al., 2006), especially during the retrenchment stage (Arogyaswamy et al., 1995). There are two reasons for this. First, as argued earlier, the downward spiral stream posits decline depletes internal resources and reduces the availability of external resources leading to firm underperformance (Gilson et al., 1990; Hambrick and D´Aveni, 1992, 1988; Pajunen, 2006; Sutton et al., 1986). A fast retrenchment process shortens the period of decline, reducing the period of resource erosion. For example, Lee et al., (2007) argue how the speed of the bankruptcy procedure improves the odds of survival by protecting the bankrupt firm internal resources and external support.

Second, one of the responses to a threat rigidity situation is the increase in the use of mechanistic structures and processes. However, retrenchment reduces the use of these (Sutton and D´Aunno, 1989). As retrenchment gathers pace, the firm becomes smaller in size. As a consequence, it becomes less complex, the need for organization and control is reduced, and the firm becomes less structurally mechanistic (Sutton and D´Aunno, 1989). A less structurally mechanistic firm is more flexible and agile, is able to achieve faster decision-making (Cascio, 1993) and faster adaptive action (Sutton and D´Aunno, 1989). For example, literature shows evidence that smaller troubled firms, being more agile, are able to retrench faster, and as a consequence fare better (Chowdhury and Lang, 1996). Thus, the faster the firm retrenches, the shorter the period they will spend operating as inflexible complex organizations. Finally, and also based on the threat-rigidity theory, a fast pace of retrenchment will prevent excessive levels of managerial stress derived from extreme decline.

Speed of retrenchment and the environment

Dynamism influences the effect of a fast pace of retrenchment on turnaround performance. First, in a dynamic environment slack resources are necessary because organizations with slack resources are more adaptable to the environment and are able respond more effectively to it (Cyert and March, 1963; Meyer, 1982; Simsek et al., 2007). As argued earlier, the alternatives a firm has to counter dynamism require slack resources (Cooper et al., 1994; Siggelkow and Rivkin, 2005; Simsek et al., 2007). In reactive

situations such as a response to an uncertain environment, retrenchment success hinges on the availability of "considerable excess resources" (Love and Nohria, 2005: pp. 1093). A fast pace of retrenchment allows a firm to shorten the period of downward spiral, avoid resource depletion and conserve resources (Lee et al., 2007). Those resources conserved as a consequence of fast pace of retrenchment can then be used to operate more effectively in a dynamic environment.

Second, as argued by the threat rigidity theory, firms respond to decline by increasing the mechanistic structures and processes (Staw et al., 1981). However, retrenchment reduces firm size, complexity and the need for organization and control, and the firm becomes less structurally mechanistic (Sutton and D´Aunno, 1989). A less structurally mechanistic firm is more flexible and agile, and thus more effective in dynamic environments (Davis et al., 2009) because dynamic environments require a firm to be able to move speedily before conditions change (Baum and Wally, 2003; Siggelkow and Rivkin, 2005). For example, Dowell and Shackle (2011) showed that small boards of distressed firms are more effective under dynamic conditions. In this type of setting the ability of declining firms to gather additional information is less valuable than "the ability to move quickly" (Dowell et al., 2011. pp. 1028). This ability is essential in turnarounds in the high tech industry (Slatter and Nokes, 2002), an industry subject to the greatest levels of dynamism. Finally, Lim et al., 2013 suggest that disposing redundant assets help firms gain lean operation and fast strategic decision-making which will help turn firms around

in dynamic environments. Based on this arguments we posit that a fast pace of retrenchment will produce earlier more agile and flexible organizations fit to operate more effectively dynamic environments (Sutton and D´Aunno, 1989). Thus, we argue:

Hypothesis 2a: Environmental dynamism positively moderates the relationship between speed of retrenchment and firm performance

First, a fast pace of retrenchment requires more resources to be executed than a standard pace. Retrenchment can be implemented rapidly only if the firm has sufficient slack resources available. For example, an employee reduction program requires firms to pay the redundancy packages in advance. Another example is the sale of firm facilities, which requires hiring external consultants to seek a potential buyer. Under high munificence, declining firms will be able to find more resources (Aragon-Correa and Sharma, 2003; Castrogiovanni and G.J., 1991; Dess and Beard, 1984), which will allow them to pace retrenchment fast. This is, under a munificent environment, a fast pace of retrenchment becomes more feasible. A faster pace of retrenchment shortens the downward spiral, avoiding resource erosion (Hambrick and D´Aveni, 1988; Lee et al., 2007) and allows an earlier reduction of firm size and complexity, and an increase in agility (Chowdhury and Lang, 1996; Sutton and D´Aunno, 1989).

Second, we noted earlier that firms in highly munificent environment are more likely to be affected by internal causes of decline (Arogyaswamy et al., 1995; Ndofor et al., 2013). Under internal causes, the decline is inflicted by the firm

itself (J. Argenti, 1976; Arogyaswamy et al., 1995; Trahms et al., 2013). As a consequence, the firm does not need to pace retrenchment measures to environmental (external) causes but it can pace retrenchment as fast as it wishes. Pacing retrenchment fast will shorten the period of downward slide reducing resource erosion and the levels of stress, and will sooner become agile.

Thus, we can argue:

Hypothesis 2b: Environmental munificence positively moderates the relationship between speed of retrenchment and firm performance.

Rhythm of retrenchment

Literature has described the benefits of a regular rhythm of change (Klarner and Raisch, 2013; Vermeulen and Barkema, 2002). By combining periods of change and stability with similar length and intensity, a regular rhythm of change is more likely to avoid information overload (Klarner and Raisch, 2013; Vermeulen and Barkema, 2002). Information overload problems appear when the amount of information to be interpreted is larger than the amount the unit can adequately process (Huber, 1991). Those peaks of change lead to overload which reduces a firm´s absorptive capacity (Huber, 1991; Vermeulen and Barkema, 2002) - defined as the ability to absorb and apply knowledge for commercial use (Cohen and Levinthal, 1990). Under a regular rhythm of change, the periods of stability will allow a pause to assimilate knowledge, increase learning and reduce the negative effects of

diseconomies of time compression (Dierickx and Cool, 1989; Klarner and Raisch, 2013). Conversely, under an irregular rhythm, the concentration of information exceeds the amount the firm can process. This overload of information results in managerial stress (Hermann, 1963; Heylighen and Vidal, 2008) leading to firm underperformance (Rudolph and Repenning, 2002).

Information overload problems are more pronounced in declining firms (D´Aveni and MacMillan, 1990; Hermann, 1963; Staw et al., 1981). As noted, under the threat-rigidity model, decline-induced stress is associated to an increase in the search of information resulting in information overload (Staw et al., 1981). Opting for an irregular rhythm of retrenchment results in excessive levels of stress given stress is sourced from both, an irregular rhythm of change (Hermann, 1963; Heylighen and Vidal, 2008; Klarner and Raisch, 2013), and a situation of decline (Staw et al., 1981). Thus, firms retrenching irregularly will underperform under severe levels of stress, while those retrenching regularly will performance better under moderate levels of stress.

However, there are some arguments supporting the opposite hypothesis, a lower performance by firms retrenching regularly. Those periods of stability, during which firms pause for information processing and reduce information overload, are periods of inaction in which the firm will spiral downwardly and resources will be eroded. Thus, a type of retrenchment concentrated in time and intensity, this is an irregular rhythm of retrenchment, may avoid an excessive deterioration of resources.

Rhythm of retrenchment and the environment

The uncertainty and turbulence originated by dynamism generates stress and anxiety among executives (Cameron et al., 1987; Waldman et al., 2001). For those firms retrenching irregularly, dynamism will then be a third source of stress beyond decline (Staw et al., 1981; D. a. Whetten, 1980) and irregularity of retrenchment (Klarner and Raisch, 2013). The periods of stability during which retrenchment is paused will likely permit the firm to reduce the levels of stress and the negative effects of information overload. Thus, we expect that firms will perform better when they retrench regularly in dynamic environments.

However, we can also argue the opposite. Those periods of stability enjoyed by regularly retrenching firms in dynamic environments will result in resource erosion and regularly retrenching firms are expected to underperform. Even if the levels of stress become excessive, firms are better off retrenching irregularly because they will shorten the period of downward spiral.

We deem both arguments equally solid, thus we argue the following two hypotheses:

Hypothesis 3a1: Environmental dynamism positively moderates the relationship between an irregular rhythm of retrenchment and firm performance.

Hypothesis 3a2: Environmental dynamism positively moderates the relationship between a regular rhythm of retrenchment and firm performance.

This tradeoff between following a regular or irregular rhythm under a dynamic environment, clearly balances under munificence towards following an irregular pace of retrenchment. A munificent environment provides a declining firm with slack resources (Boyne and Meier, 2009; Dess and Beard, 1984; Keats and Hitt, 1988). Those slack resources can be used to information processing and implementation of retrenchment measures, which will mitigate the negative effects of managerial stress. At the same time, irregular retrenchment will shorten the period of downward slide. Thus we put forward our hypothesis:

Hypothesis 3b: Industry munificence positively moderates the relationship between an irregular rhythm of retrenchment and performance.

2.3. Methodology

Data and Sample

Our aim was to study companies in a turnaround situation implementing retrenchment measures. We used data from the Standard and Poors´ Compustat quarterly files to select firms implementing retrenchment measures between 1979 and 2007, and examine their effects three years later. We chose a sufficiently ample time period to include periods of expansion and periods of recession (Morrow et al., 2004). Literature has noted

that the selection of an appropriate sample is very important for the study of turnarounds and there has been much debate on what is considered a declining firm (Barker III and Duhaime, 1997). Literature considers declining firms as those subject to a period of decline (Ndofor et al., 2013). A period of decline is measured as a period of several consecutive years of negative performance which needs to be preceded by several years of positive performance (Barker III and Duhaime, 1997; Bruton et al., 2003; Tangpong et al., 2015). Based on prior literature, we considered a declining firm as one having two years of increasing ROI followed by three years of negative ROI (Barker III and Duhaime, 1997; Bruton et al., 2003; Ndofor et al., 2013). The criterium eliminates those firms incurring in a sharp correction due to accounting anomalies rather than actual decline (Ndofor et al., 2013). If a firm met these requirements more than once over the period, we used in our analysis data from the first time those requirements were met (Barker and Mone, 1994; Morrow et al., 2004).

In order to exclude small and midsized firms, we selected only those firms with more than 500 employees (Bibeault, 1982; Chen, 2014; Lim et al., 2013). Also, we selected relatively undiversified firms to avoid amalgamation between activities. We only included in our sample those firms with an entropy score equal to zero (Morrow et al., 2004). We only selected those firms operating in the manufacturing industry, this is firms with US SIC codes between 2000 and 4000 (Dawley et al., 2002; Morrow et al., 2004). From this subsample, we selected those firms implementing either asset retrenchment or cost

retrenchment. Firms undergoing asset retrenchment are those firms reducing total assets of more than 5% during the five years following the third year of decline in ROI. Firms undergoing cost retrenchment are those firms reducing SGA costs by more than 5% during the five years following the last year of decline in ROI (Lim et al., 2013; Morrow et al., 2004; Ndofor et al., 2013).

Our sample included 263 firms. The sample constitutes an unbalanced panel because some of the firms in our sample were liquidated, acquired, delisted, etc. The inclusion of those is firms in the sample is subject to survival bias and is one of the major critics to sampling turnaround firms (Barker and Mone, 1994; Ndofor et al., 2013). We performed analyses of the variance (ANOVAs) comparing performance, number of employees and total assets between surviving and non-surviving firms. We did not find significant differences between both groups in the two-year period of pre-decline and in the three-year period of decline (Ndofor et al., 2013). We did find differences however in the post decline period.

Period of study

Previous turnaround studies have used up to six years starting from the third year of decline. We used an eight-year period of study. However, our analysis started the first year of decline. We wanted to avoid missing the fact that there are firms initiating the turnaround during the first three years of decline. Considering the initiation of the turnaround after the three years of decline would have biased our results to miss those firms reacting very early. However, we also wanted to capture, consistent with literature, the

turnaround activity during the years after the three-year decline period has elapsed. Thus, in our study we took eight years in total, which included the three year period of decline and a post decline period of five years.

2.3.1 Variables

Dependent variable

The choice of a performance variable can be challenging based on the multi-dimensionality of organizational performance (Miller et al., 2013), thus we carefully selected our dependent variable. We used a market variable for our research. First, market variables are common to both, retrenchment studies (Morrow Jr. et al., 2004; Norman et al., 2012), turnaround studies (Chen and Hambrick, 2012) and time studies (Pacheco-de-Almeida et al., 2015). We used Tobin´s Q as the measure of return and as our dependent variable. Tobin´s Q has previously been used in time research (Pacheco-de-Almeida et al., 2015) because the variable captures intangible capabilities (Dowell et al., 2000), and time capabilities have been previously considered as intangible (Pacheco-de-Almeida et al., 2015, 2010). Tobin´s Q has also been used in turnaround studies as a measure of the perceived ability of the firm to achieve the returns required by investors (Morrow et al., 2004). Prior literature has argued that Tobin´s Q is a better measure of firm value than accounting variables, such as ROA or ROS (Dushnitsky and Lenox, 2006; Yang et al., 2014) and does not require risk adjustment to compare across firms (Li and Tallman, 2011). We calculated Tobin´s Q as the sum of a firm´s equity value, its book value of the long term debt and its net current liabilities, divided by the total

assets of the firm (Pacheco-de-Almeida et al., 2015). Second, the use of a market variable is also due to the design of our control model. As we argued earlier, turnaround studies have been strongly criticized for not controlling the causes of decline (Arogyaswamy et al., 1995; Barker III and Duhaime, 1997). We have introduced strong controls for the causes of decline (see below "control variables" section). The variable used to control for the internal causes of decline is based on the accounting variable Return on Sales. Because accounting variables tend to be highly correlated among them, and in order to avoid correlation with this important control variable, we used as our dependent variable a market variable. We lagged our variable to reflect the delay effects of retrenchment measures on firm performance. We introduced a three-year (twelve quarters) lag in our analyses (Lim et al., 2013; Morrow et al., 2004) but we used a two-year (eight quarters) lag for robustness purposes.

Independent and moderating variables

Our independent variables include two external environment variables (munificence and dynamism) and three time-related variables (timing, speed and rhythm of retrenchment). Those variables have been constructed as a derivation of the variable retrenchment. Thus, we first describe the calculation of our retrenchment variable and then describe the three time variables.

Retrenchment: We created the variable retrenchment as the sum of the standardized score of asset retrenchment and cost retrenchment. Asset

retrenchment and cost retrenchment are the two retrenchment strategies a firm can follow (Lim et al., 2013; Morrow et al., 2004). Asset retrenchment was calculated as the percent change in the firm total assets from one quarter to the next. Cost retrenchment was calculated as the percent change in the cost of SGA from one quarter to the next. Given the high correlation of asset and cost retrenchment, they were mean centered and added to form one variable. This variable was used both, to generate the three time variables (timing, speed and rhythm of retrenchment) and as a control variable.

Time variables: We measured our three time variables, following other time and change studies (Bridoux et al., 2013; Elfenbein and Knott, 2014) as the number of quarters between the initiation of the event and the end of the event.

Timing of retrenchment: We measured timing of retrenchment as the count of the number of quarters between the quarter in which decline was initiated and the quarter in which retrenchment was initiated.

Speed of retrenchment: We measured speed of retrenchment as the number of quarters between the quarter in which retrenchment was initiated and the quarter in which the firm completed 90% of the retrenchment program. For robustness purposes, we used different percentages to calculate speed of retrenchment which will be described in section below “Robustness check”.

Rhythm of retrenchment: Following Vermeulen and Barkema (2002), we operationalized rhythm of retrenchment as the kurtosis of the first derivative of the retrenchment variable over time for the period of study.

We reverse coded these four variables in order to facilitate interpretation of the results. Greater values of retrenchment or greater values of timing, speed or rhythm of retrenchment indicate deeper cuts, an early initiation of retrenchment, a faster pace of retrenchment or a regular rhythm of retrenchment. Finally, these four variables are shown in a mean-centered form given they are derived from the variable retrenchment, which has been mean-centered. Mean centering avoids collinearity problems in the interaction-effects analyses.

External environment variables: Our external environment variables are munificence and dynamism. We have estimated dynamism and munificence using quarterly data to remain consistent with the rest of the variables. Recent research has used quarterly data to measure dynamism (Patel and Cooper, 2014).

Dynamism: Dynamism was measured by dividing the standard error of the slope coefficient by the mean value of sales at 4-digit SIC level for a twenty-quarter period (Boyd, 1990).

Munificence: Munificence was measured by the slope of the regression of time against total industry sales (at 4-digit SIC level) for a twenty-quarter period divided by the mean value (Boyd, 1990).

Control variables

As cited earlier, one of the major critics in the turnaround research has been the lack of control for the causes of decline. Most recent research introduces measures to control the causes of decline (Chen and Hambrick, 2012; Lim et al., 2013; Schmitt and Raisch, 2013). Chen (2014) proposes controlling industry growth as a measure for internal causes. We agree a growing environment reflects causes of decline, however we interpret the variable slightly differently: A non-growing industry is a measure of external causes of decline rather than internal causes. We control external causes with the variable munificence. As a measure for internal causes, we introduced a variable reflecting the wedge between the average industry performance and the firm performance (Lim et al., 2013). The variable reflects sub-par performance and is consistent with Argogyaswamy et al (1995: pp. 507) idea that internal causes occur when firms "perform worse than the average firm in the industry". To calculate this variable, given the operational problems of ROA or ROI, we opted for using ROS (Barker and Mone, 1994; Trahms et al., 2013). The variable is calculated as the subtraction of the industry average ROS from firm ROS. Higher values of internal causes represent internal causes are more important in the decline of the firm.

Prior research has shown there are a number of variables affecting firm performance in turnaround and time studies. As control variables we included firm size, liquidity, leverage and severity of decline. As discussed earlier, we also included retrenchment itself as a control variable. We controlled for firm

size given evidence has shown that smaller organizations have higher levels of inertia leading to a lower intensity of reorganization (Baker and Cullen, 1993; Barker III et al., 2001). We measured firm size as the number of employees. This variable was log formed. Declining firm liquidity, leverage and severity, besides having being used consistently by the turnaround literature as control variables, they are likely to affect how early, fast or regular a firm can retrench. Liquidity was estimated as the current ratio. The variable was calculated by dividing the current assets over the current liabilities (Morrow et al., 2004; Schmitt and Raisch, 2013). Leverage was operationalized as the long term debt to asset ratio (Lim et al., 2013). Severity was operationalized as the Altman´s Z (Barker III et al., 2001). As discussed earlier, the estimation of retrenchment has been described in the independent variables section given the variable has also been used to operationalize the three time variables. Finally, we also introduced two types of time dummies. First, we used four quarterly dummies to control for seasonality (Bridoux et al., 2013; Elfenbein and Knott, 2014). Second, we also control for the economic cycle in which decline occurred by introducing period dummy variables. Period dummies are common in studies spanning a long time horizon (Briscoe et al., 2014; Pathak et al., 2013; Whittington et al., 2016). Similar to other studies, we use four decade dummies reflecting the decade in which the firm obtained the first loss within the period of decline (Elfenbein and Knott, 2014; Pathak et al., 2013).

Estimation Method

Given the characteristics of our data, potential problems of heteroskedasticity are expected. The presence heteroskedasticity does not violate the consistent assumption of ordinary least square estimator, but violate the efficiency assumption. Thus, OLS is not the best possible estimator. We initially use pooled-cross section but the Hausman test was rejected (Wald = 121.29, $p<0.001$). To handle with such problems, and avoid autocorrelation and heteroskedasticity we use the feasible generalized least squares (FGLS) approach (Wooldridge, 2009). The FGLS estimator permits to obtain unbiased, consistent, efficient, and asymptotically normal estimators (Kariya and Kurata, 2004).

2.4 Results, discussion and limitations

Results

Descriptive statistics and correlations for all the variables used (excluding time and quarterly dummies) appear in table 1. The table includes the variance inflation factors. The factors denote that multicollinearity is not a problem in our analyses given none of the factors approach the threshold of 10 (Aiken and West, 1991). The factor with the highest value is 2.33. In any case, to definitely exclude multicollinearity problems, all the independent variables have been mean-centered prior to the creation of the interaction terms (Aiken and West, 1991).

Table 2 presents the empirical results of our panel regression. The models also include time and quarterly dummy variables to account for unobservable effects of the business cycle and seasonality, respectively. Model 1 presents the control model. Model 2 presents the main effects model. Model 3 presents the results for the interactions of timing, speed and rhythm of retrenchment with dynamism (Hypotheses 1a, 2a and 3a1/3a2). Model 4 presents the results for the interactions of timing, speed and rhythm of retrenchment with munificence (Hypotheses 1b, 2b and 3b). Our hypothesis 1a posited that dynamism strengthens the effects of an early timing of retrenchment on firm results. However, as our results show in table 2 (β = -0.017, $p < 0.01$) and when dynamism is high, an early timing of retrenchment leads to the opposite, a lower performance. In contrast, as predicted by our hypotheses 2a and 3a1 and as shown in Model 3, a fast pace of retrenchment (β = 0.014, $p < 0.01$) and an irregular pace of retrenchment (β = -0.052, $p < 0.05$) lead to higher firm performance when dynamism is high (Figure 2).

Hypotheses 1b, 2b and 3b proposed that an early timing, a fast speed and an irregular rhythm of retrenchment lead to a higher firm performance upon conditions of high munificence. Our results in Model 4 were able to confirm that in a high munificent environment an early timing of retrenchment (Hypothesis 1b: β= 0.033, $p < 0.001$) and an irregular pace of retrenchment (Hypotesis 3b: β = -0.141, $p < 0.001$) lead to higher firm performance (Figures 1 and 3). However, our results were not able to confirm that a fast pace of

retrenchment lead to higher profitability in a high munificent environment (Hypothesis 2b). In relation to our control model, we find that most of the variables are significant to all the models. Specifically liquidity, gearing, firm size and severity are significant to all the models. The results of our control model conform to the results obtained in existing turnaround literature (Barker III et al., 2001; Morrow et al., 2004; Ndofor et al., 2013; Schmitt and Raisch, 2013) and time literature (Hawk et al., 2013; Pacheco-de-Almeida et al., 2015).

Table 1

Descriptive statistics, vifs and correlations

Variable	Mean	S.D.	Min	Max	VIF	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1. Tobin´s Q	1.543	0.943	0.362	21.732		1											
2. Tobin´s Q (t+3)	1.566	0.854	0.362	8.384		0.54	1										
3. Liquidity	2.269	1.411	0.139	24.987	2.33	-0.06	-0.16	1									
4. Gearing	0.241	0.224	0.000	1.908	1.24	-0.00	0.04	-0.16	1								
5. Size [a]	12.898	29.225	0.005	486	1.06	0.11	0.17	-0.16	-0.00	1							
6. Altman´s Z	2.104	2.221	-8.083	65.944	1.51	0.56	0.18	0.38	-0.41	-0.03	1						
7. Munificence [a]	10.383	14.731	0.194	141.118	1.50	0.05	0.06	0.03	-0.11	-0.02	0.04	1					
8. Dynamism	4.950	13.905	0.014	148.726	1.47	-0.01	-0.01	0.02	-0.09	-0.02	0.02	0.56	1				
9. Retrenchment [b]	-0.001	1.530	-30.789	6.160	1.04	0.12	0.02	-0.01	-0.02	-0.02	-0.13	0.03	0.05	1			
10. Timing [b]	-0.000	1.560	-6.926	1.926	1.11	-0.07	-0.04	0.00	-0.00	-0.01	-0.05	0.05	0.01	0.05	1		
11. Speed [b]	-0.002	1.705	-3.009	6.371	1.12	0.06	0.12	-0.06	-0.08	0.01	-0.01	0.04	-0.02	0.00	-0.21	1	
12. Rhythm [b]	-0.000	1.000	-4.012	1.107	1.06	-0.08	-0.06	0.02	-0.13	-0.04	-0.01	0.04	0.04	0.08	0.06	-0.03	1

N=263 firms. *95% significant. Temporal dummies included.

[a] Log transformed [b] These variables have been constructed with a standardized variables, thus the only information available is in a standardized format.

Table2
Results of regression analyses

	1	2	3	4
Control variables				
Liquidity	-0.179***	-0.167***	-0.164***	-0.156***
	(0.007)	(0.007)	(0.007)	(0.007)
Gearing	0.725***	0.688***	0.696***	0.700***
	(0.038)	(0.043)	(0.043)	(0.043)
Size	0.003***	0.003***	0.003***	0.004***
	(0.000)	(0.000)	(0.000)	(0.000)
Altman´s Z	0.283***	0.123***	0.123***	0.126***
	(0.013)	(0.006)	(0.006)	(0.006)
Retrenchment	0.014**	0.009*	0.007	0.008
	(0.004)	(0.004)	(0.004)	(0.004)
Causes of decline	-0.001	-0.005	-0.006	-0.006†
	(0.018)	(0.021)	(0.021)	(0.022)
Maineffects				
Dynamism		-0.001	0.034†	0.020***
		(0.005)	(0.017)	(0.005)
Munificence		0.016†	0.005	0.017†
		(0.009)	(0.010)	(0.010)
Timing		0.031***	0.031***	0.036***
		(0.004)	(0.004)	(0.004)
Speed		0.064***	0.066***	0.065***
		(0.004)	(0.004)	(0.004)
Rhythm		0.024***	0.017*	-0.004
		(0.006)	(0.008)	(0.008)
Interactions				
TimingXDynamism (H1a)			**-0.017****	
			(0.007)	
SpeedXDynamism (H2a)			**0.014****	
			(0.006)	
RhythmXDynamism (H3a1&H3a2)			**-0.052***	
			(0.020)	
TimingXMunificence (H1b)				**0.033*****
				(0.008)
SpeedXMunificence (H2b)				**0.004**
				(0.005)
RhythmXMunificence (H3b)				**-0.141*****
				(0.016)
Constant	1.969	1.694	1.677	1.663
Time dummies	Included	Included	Included	Included
Quarterlydummies	Included	Included	Included	Included
Chi-squaredstatistic	1867,87	3349.23	4441.75	2928.25
Number of observations	3042	3042	3042	3042

****p*<0.001; ***p*<0.01;**p*<0.005;†*p*<0.1

Graphic and descriptive way we can see the results in figures 1, 2 and 3.

Figure 1: Moderating effects of timing, munificence and firm performance

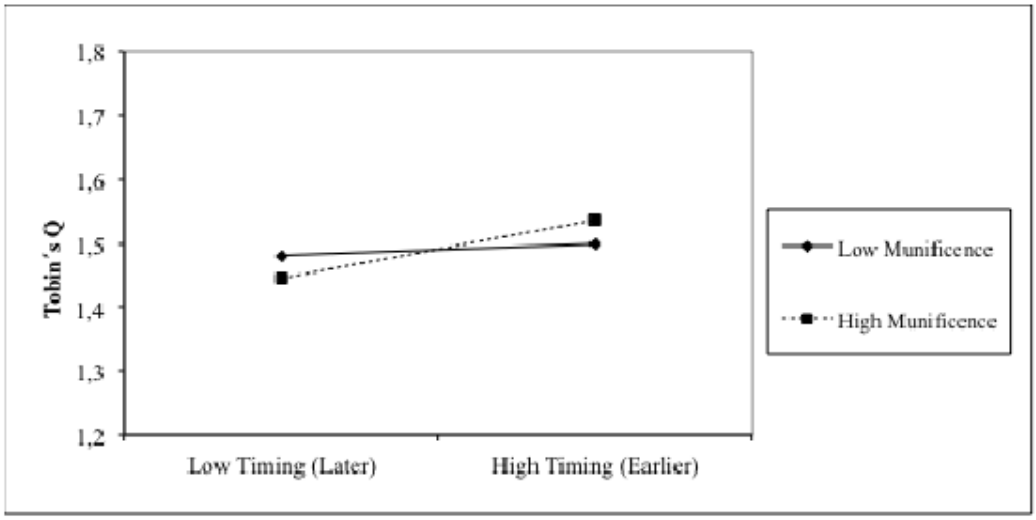


Figure 2: Moderating effects of rhythm, dynamism and firm performance

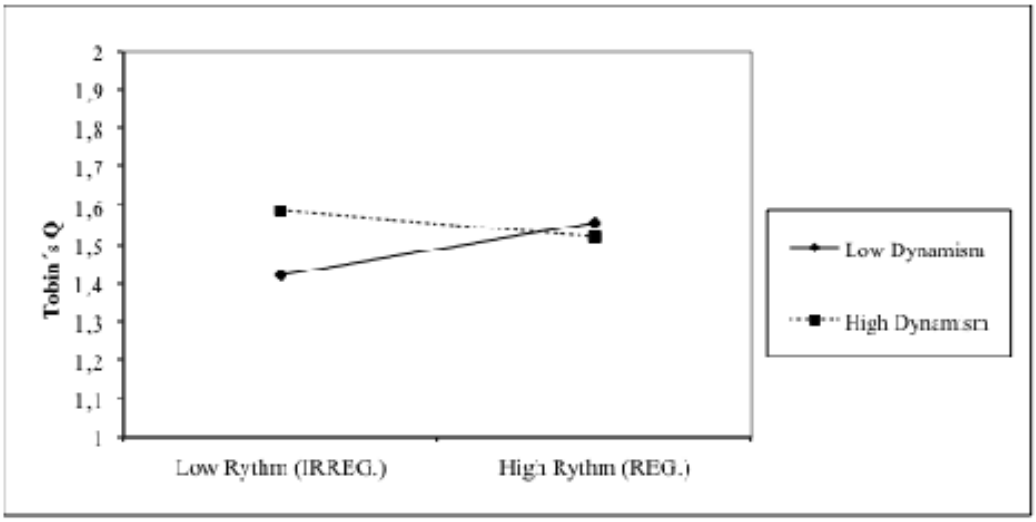
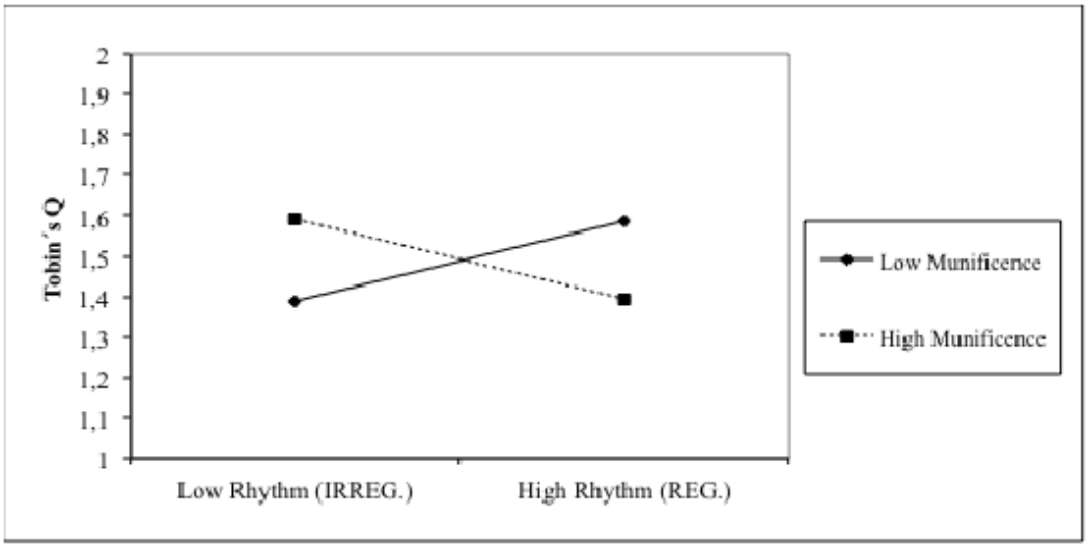


Figure 3: Moderating effects of rhythm, munificence and firm performance



Robustness check

To increase the reliability of our results, we used a quadratic specification for our timing, speed and rhythm of retrenchment given literature has argued a quadratic relationship for retrenchment (Schmitt and Raisch, 2013). Second, we reestimated the models using two-year lags (eight quarters) of the dependent variable, consistent with research by some turnaround studies (Morrow et al., 2004). Finally, we reestimated our models by calculating speed of retrenchment based on the 75% and 80% of the retrenchment completion, instead of the 90% criteria used in our study. In all these three cases, results were highly consistent with those reported here. These additional tests increase our confidence in the validity of our results.

Discussion

The turnaround literature has consistently argued (Arogyaswamy et al., 1995; Bibeault, 1982; Grinyer and Spender, 1988; Slatter et al., 2006) but has showed scant evidence (Tangpong et al., 2015) that time issues are critical. We extend the study of time to the influence of the external environment. Applying the downward spiral stream and the threat-rigidity theory and consistent with these frameworks, we posit and found that the influence of the temporal dimensions of retrenchment on turnaround success are highly contingent to the type of environment the firm operates in. Our results indicate that an early timing of retrenchment leads to lower returns in dynamic environments and to higher returns in a munificent environment. We also found that under high dynamism a fast pace and an irregular rhythm of retrenchment produce superior returns. Finally, we found that under high munificence an irregular rhythm of retrenchment lead to higher likelihood of turnaround.

Our research indicates that, with exceptions based on the type of environment, the general rule is declining firms should be more time aggressive when executing retrenchment measures. However, they should be more time aggressive in munificent environments than in dynamic environments.

Theoretical implications

Our research contributes and expands the turnaround literature in several ways. First, our research contributes to the scant but important literature confirming the importance of time to turnarounds (Tangpong et al., 2015). Recent studies have showed evidence of the importance of the timing to retrenchment (Tangpong et al., 2015) and to downsizing (Brauer and Laamanen, 2014). We contribute to those discussions by extending the temporal framework to two other important variables: speed and rhythm of retrenchment. We find that in the study of time and turnarounds, it is not only important the "when" of retrenchment (timing) (Tangpong et al., 2015), but also the "how" of retrenchment, this is, how fast or slow (speed of retrenchment) and how regular or irregular (rhythm of retrenchment) should its execution be.

Second, turnaround studies have shown contradictory evidence on the value of retrenchment (Barker and Mone, 1994; Robbins and Pearce, 1992; Trahms et al., 2013). However, those studies did not take into account the time dimension, which appears as a long discussed but hardly researched critical contingent factor. Our evidence seems to confirm the scant but growing literature showing evidence that "without such temporal considerations, the extant theoretical perspective on retrenchment and turnarounds is incomplete" (Tangpong et al., 2015: pp. 672). Furthermore, when time considerations are included in the analysis, retrenchment is a strategy positively influencing turnaround outcomes. Our evidence confirms the

suggestion by the downward slide stream, and the extensive number of hints by the turnaround literature, that time is important to turnarounds.

Third, in most areas of management there exists an abundant body of research dealing with the effects of the environment on firm performance. In the case of turnarounds, the environment has most of the time been studied as a secondary topic (Boyne and Meier, 2009) and few studies and only recently have endeavored to research the environment as a core topic (Ndofor et al., 2013; Schmitt et al., 2015). Still early seminal works pointed to how critical the environment is (Hambrick and D´Aveni, 1988; Staw et al., 1981). If turnaround literature studies in essence the reversal of a declining firm resource erosion process, and the environment can act as a resource facilitator or as a trigger to firm demise, the environment should be a core topic to turnarounds. Our paper is, one of the few contributions (Abebe et al., 2011) researching at the same time the two most studied environment variables, dynamism and munificence. Furthermore, the study of the environment allows us to control for the causes of decline, which is, the most numerous, important and well-founded critic to turnaround studies. In summary, our paper contributes to devolve the topic of the environment the importance it deserves to turnaround research.

Fourth, we extend the downward spiral and threat-rigidity frameworks by linking them to the study of time and the environment. As discussed, this extension is natural and produces an excellent fit given the longitudinal nature of the downward spiral stream and the inclusion of the environment as

a key element to both streams. We extend the downward spiral theory by aligning the longitudinal nature of the decline model with the temporal traits of the retrenchment actions required to reverse decline. Also, we extend the threat rigidity theory by arguing that the firm responses to decline predicted by the theory influence the "when" and the "how" of retrenchment and time when confronted with a given type of environment. By using both theories, we concur with other decline studies arguing the need of or using a multipluraristic theory building approach when situations are complex such as the study of decline (S F Latham and Braun, 2009; McKinley et al., 2014; Schmitt et al., 2015).

Managerial implications

Our findings also offer contributions to managers and investors. From a strategy point of view, turnaround practitioners and distress investors should be aware that under decline, the formulation and implementation of retrenchment decisions impacting a firm strategy (reduction or elimination of SKUS, products, business lines, geographic scope, etc) are subject to important time and environmental considerations. Our results suggest that the general rule is that practitioners and investors should be, under any type of environment, more time-aggressive (retrench earlier, faster and in a more concentrated fashion) when formulating and executing retrenchment measures. However, there are small differences in the type of environment. Firms should be more time aggressive in munificent environments and less time aggressive in dynamic environments.

In a dynamic environment declining firms will improve results through an initial deep gathering of the information and strategic formulation, which will delay the start of the turnaround. Once gathered, a fast pace and an irregular pace of retrenchment will improve performance. Similarly, faced with a munificent environment, the performance of a declining firm will be enhanced when retrenchment is performed earlier and paced in a concentrated irregular fashion. Under munificence, during the early stages of a turnaround, embarking on deep firm analysis will not improve performance. Quicker initial strategic formulation and early action seems key to firm survival and performance improvement. Finally, munificent environments provide declining firms with slack resources that can be used to reduce stress, and a regular and hence concentrated retrenchment becomes beneficial.

Limitations and future research

Our work has a number of limitations. The main limitation of our study is that we focus our examination on the retrenchment stage only. Literature has supported a model of two stages in which retrenchment precedes recovery. Our study has focused only on retrenchment, the first stage of a turnaround. Future studies should extend research of time and the external environment to the recovery stage. In that case, we suspect the results of the study will show munificence offers stronger benefits than dynamism given once the recovery stage has been reached, firms are more stable.

Second, in our research we have included two variables to control for the causes of decline. The causes of decline have been argued to be very

contingent to turnaround success. However, the controls introduced are simplistic (external causes/internal causes) given literature has detected an elevated number of causes of decline (Bibeault, 1982; Slatter et al., 2006). Although a difficult task, our study would benefit from a more sophisticated mechanism to control for the different causes of decline a firm could incur in.

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THIRD CHAPTER:

FIRM DISTRESS AND THE PACE OF TURNAROUND CHANGE

3.1. Introduction

Time, along with financial resources, is one of the two key resources relevant to a successful turnaround (Zimmerman, 1991), however, time in a turnaround context is an underresearched topic of study (Tangpong et al., 2015). Early (Arogyaswamy et al., 1995; Bibeault, 1982; Zimmerman, 1991) and more recent turnaround literature (Boyne and Meier, 2009; Shein, 2013; Tangpong et al., 2015) has unanimously advocated, but not tested, the need for a fast pace of change in the management of declining firms. Thus, this stream assumes but lacks empirical evidence that the faster the turnaround execution the higher the performance, especially during the initial retrenchment stage (Arogyaswamy et al., 1995). The turnaround literature also leaves unanswered whether, another dimension of the pace of change, the rhythm of change, is relevant to turnaround success.

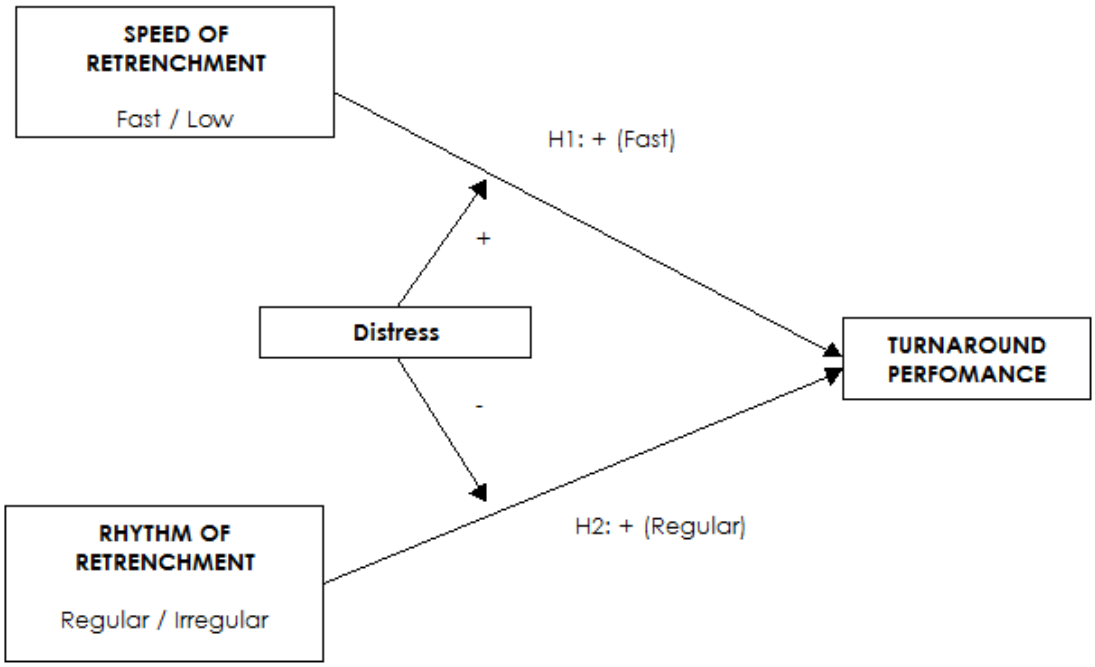
In contrast, the change literature has advanced the study of change and time with very interesting results (Amis et al., 2004; Dominguez CC et al., 2015; Hawk et al., 2013; Pacheco-de-Almeida et al., 2015). The change literature has studied the pace of change by concentrating attention on the speed and rhythm of change. For this line of research, in contrast to the turnaround literature, evidence show that speed of change has less influence on firm performance. Moreover, excessive speed may prompt organizational collapse (Huy, 2001). Also, the change literature has showed evidence that the rhythm of change has a great impact on firm performance given firms following a regular rhythm of change outperform those following an irregular

rhythm (Amis et al., 2004; Klarner and Raisch, 2013; Sastry, 1997). Regularity of change allows firms to avoid information overload and reduces diseconomies of learning, leading to firm over performance (Amis et al., 2004; Klarner and Raisch, 2013). In summary, we find opposing views on the effects of firm pace of change on performance between the turnaround literature, based on its long held assumption of the need of change speed, and the change literature, which supports the idea that the rhythm of change should be regular. The aim of our study is to shed light on these opposing views by delving into the speed and rhythm of change as its two most studied temporal dimensions in a turnaround setting.

Our study focuses on the pace of change of declining firms during retrenchment. Retrenchment is the initial stage in a turnaround and the one in which deeper changes are introduced given the firm objective is firm survival and the return to positive cash flow (Pearce II and Robbins, 1993). In our research, we posit that the relationship between firm performance and pace of retrenchment is contingent to a firm´s level of distress. We argue that in situations of higher distress, given the imminent risk of failure, a fast pace of retrenchment will lead to higher performance. In contrast, in situations of lower distress, declining firms will outperform by following a regular rhythm of retrenchment given this pace will reduce information overload and increase firm learning. We test our hypotheses in a sample of US Compustat declining firms between the years 1995 and 2003 introducing retrenchment measures during a six year period. We find that the level of firm distress is a strong

moderator of the pace of change and the results confirm our hypotheses. Our research reconciles assumptions made in the turnaround line of research with extant change literature through the moderation of a firm´s level of distress. We contribute to the recent emergence of the literature on time and change and to the turnaround research area. Our research model has been depicted in figure 1.

Figure 1: Conceptual model



In the first section, drawing on the literatures of change and turnaround, we develop our hypotheses. In the following section, we describe our sample and the methodology used. In the third section, we explain the results. Finally, we address the conclusions, limitations and future lines of research.

3.2. Hypotheses

Theoretical framework

The pace of change

During the last two decades, the change literature has studied the effects of time as an important topic of research (Amis et al., 2004; Ancona et al., 2001; Huy, 2001; Pacheco-de-Almeida et al., 2010, 2015; Sastry, 1997). One of the most studied aspects has been the pace of change (Amis et al., 2004; Gersick, 1994; Huy, 2001; Klarner and Raisch, 2013). Pace is defined as the time span between sequential changes (Amburgey et al., 1993). The pace of change marked by the organization is essential to firm effectiveness (Huy, 2001) and a factor explaining the loss of firm competitive performance (Pettigrew et al., 2001). The literature of change has mostly researched the speed and rhythm of change as two key aspects of the pace of change (Amis et al., 2004; Huy, 2001; Klarner and Raisch, 2013; Vermeulen and Barkema, 2002). First, speed is defined as the amount of time that a firm spends to complete an action or a process (Chen and Hambrick, 1995; Vermeulen and Barkema, 2002). A firm can pursue a fast or a slow pace of change depending on whether changes are completed in a short or an extended period of time. Second, rhythm is defined as the pattern of variability in the intensity and frequency of activity (Huy, 2001). A firm can pursue a regular or an irregular pace. Under a regular pace of change, the intervals between changes are equal in time and intensity, whereas under an irregular pace the intervals differ in length and intensity (Klarner and Raisch,

2013; Vermeulen and Barkema, 2002). Under an irregular pace, firm changes become more concentrated, however, under a regular pace the changes become more disperse (Vermeulen and Barkema, 2002). In sum, by setting the pace of change, firms imprint the speed -how fast or slow should action be- and the rhythm of change -how regular or irregular should action be-.

Turnaround literature has overwhelmingly argued but not tested how critical time is to situations of firm decline (Arogyaswamy et al., 1995; Bibeault, 1982; Tangpong et al., 2015). Time can by itself influence the outcome of a turnaround and, along with financial slack, is the most important resource to turnaround success (Zimmerman, 1991). A fast response to decline has been argued to lead to turnaround performance (Arogyaswamy et al., 1995; Boyne and Meier, 2009). The logic behind is, decline is a protracted downward spiral process eroding firm resources (Hambrick and D´Aveni, 1988; Heine and Rindfleisch, 2013). Specifically, the process erodes reputational (Sutton and Callahan, 1987), human (Hambrick and D´Aveni, 1992) and financial resources (Hambrick and D´Aveni, 1988). Given resource erosion leads to firm underperformance, the faster management takes action, the more resources and capabilities are safeguarded and the higher the firm performance. For instance, research in board performance has showed evidence of how, in situations of distress, large boards underperform small boards. Small boards move more quickly, and under distress, the ability to move quickly is very valuable (Dowell et al., 2011).

In contrast to the turnaround stream, the change literature has a different view. The change stream agrees that there is a "right" pace to organizational change. This stream has showed evidence that the right pace is not necessarily the fastest pace (Amis et al., 2004; Klarner and Raisch, 2013). Moreover, excessive speed of change could lead to organizational collapse (Huy, 2001). Then, the right pace involves a combination of change combined with settling down periods (Amis et al., 2004; Huy, 2001; Klarner and Raisch, 2013). Drawing from the change-stability paradox, the stream finds that the switch between stability and change is necessary for organizational effectiveness (Farjoun, 2010). A regular rhythm of change, by alternating change and stability, provides a path for firms to change but also to improve performance (Klarner and Raisch, 2013). A regular rhythm distributes the changes relatively equally over a period of time (Klarner and Raisch, 2013).

In summary, the change literature and the turnaround literature arrive to different conclusions on how firms should pace change. While the turnaround literature argues that firms should follow a fast pace of change (Arogyaswamy et al., 1995; Boyne and Meier, 2009; Shein, 2013) , the change literature posits that firm should follow a regular path of change (Amis et al., 2004; Sastry, 1997).

Change in a turnaround context

Pearce II and Robbins (1993) proposed, based on the turnaround literature review, a very influential two-stage model of turnarounds. During the initial retrenchment stage firms deliberately eliminate assets or reduce costs in

order to increase firm efficiency (Lim et al., 2013; Pearce II and Robbins, 1993; Trahms et al., 2013). The objective during this stage is firm survival and the generation of positive cash flow. In the second stage, the recovery stage, firms pursue changes to transform and reposition the firm with the objective of growth and profitability (Barker III and Duhaime, 1997; Pearce II and Robbins, 1993; Schmitt and Raisch, 2013). We focus our research in the retrenchment actions, this is, the actions carried during the retrenchment stage for two reasons. First, these actions are critical to the declining firms given their objective is survival (Pearce II and Robbins, 1993). Second, given the objective is firm survival, the retrenchment stage tends to be a period of intense change in which radical action is mainly taken.

Firms taking retrenchment actions follow a pace of retrenchment. The pace of retrenchment has many temporal dimensions, being speed and rhythm the subject of our study. We define both dimensions in line with the change literature (Amis et al., 2004; Huy, 2001; Vermeulen and Barkema, 2002). The speed of retrenchment can be defined as the amount of time a firm takes to complete the retrenchment process. The rhythm of retrenchment refers to the pattern of variability in the intensity and frequency of retrenchment.

Pace of retrenchment and firm distress

We argue next that, in a turnaround context, the impact of the pace of retrenchment on performance is contingent to the level of firm distress. Specifically, we hypothesize that a fast pace of retrenchment (speed) is more important when the firm is experiencing higher levels of distress. Contrastingly,

we also hypothesize that a regular pace of retrenchment (rhythm) is more important under lower levels of distress.

Under decline, the firm will be lead to a situation of information overload (Hambrick et al., 2005; Staw et al., 1981). Information overload is suffered by an organization when the information to be interpreted exceeds its capacity to process the information adequately (Huber, 1991). In a situation of information overload, the slack time available to analyze and evaluate past changes is reduced, increasing thus the negative effects of time compression diseconomies (Dierickx and Cool, 1989). A lower time slack reduces firm learning, leading to a less effective, underperforming firm. There are three reasons that lead declining firms to a situation of information overload. First, executives suffering high job demands are more likely to encounter information overload (Hambrick et al., 2005). Job demands of executives in declining firms are higher because they suffer greater workload and task challenges and possess limited time and resources (Chen, 2014). Turnaround executives are subject to high levels of stress which hinders their ability to analyze information (Arogyaswamy et al., 1995; Ford and Baucus, 1987). Second, the threat rigidity response model posits decline generates a change in the information-processing pattern of the organization (Staw et al., 1981). Under decline, management increases search behavior. This behavior is prone to generate information overload (D´Aveni and MacMillan, 1990; Staw et al., 1981). Third, the lack of stakeholder support common in declining firms brings a reduction of the information channels. The few available

channels become bloated with information (Hermann, 1963). In summary, in turnaround situations there is a number factors leading to information overload and thus to underperformance.

A regular rhythm of change has been found to mitigate the negative effects of information overload (Klarner and Raisch, 2013). Under a regular rhythm, changes are distributed equally over time. A longer time span between changes increases the time available to evaluate past changes and decreases the negative effects of time compression diseconomies (Dierickx and Cool, 1989; Klarner and Raisch, 2013). Thus, a regular rhythm of retrenchment seems initially more appropriate to situations of information overload such as decline.

However, not all situations of decline are equal and the level of distress can vary. In situations of high distress, firms may not be able to afford a regular rhythm of retrenchment. The downward slide stream argues that decline is a protracted continuous process of resource erosion (Hambrick and D´Aveni, 1988). Following a regular rhythm of retrenchment implies there will be some periods of inaction during which the downward spiral process will continue eroding the firm resources. If the firm is in high distress, this erosion process will reduce the scant slack resources left and drive the organization to collapse. Thus, under high levels of distress, firms will need to act fast to shorten the period of decline and avoid periods of inaction which are periods of resource erosion (Hambrick and D´Aveni, 1988). For example, a high level of distress is a type of situation in which “the ability to gather additional information and

consider a great number of options, are unlikely to be as valuable as the ability to move quickly" (Dowell et al., 2011: pp. 1028). Thus, under high levels of distress, a firm may need to act fast to shorten the resource erosion process and reduce the risk of failure. In this type of situation, the faster retrenchment is implemented, the higher the firm performance. Hence, we argue:

Hypothesis 1: Firm distress will moderate the relationship between speed of change and performance turnarounds so that the greater the level of distress, the more that a fast pace of change increases firm performance.

Hypothesis 2: Firm distress will moderate the relationship between rhythm of change and performance turnarounds so that the lower the level of distress, the more that a regular rhythm of change increases firm performance.

3.3. Methodology

Data and sample

Starting from decline firms in turnaround, we establish our sample from the Compustat database quarterly files to select declining firms in the Standard and Poor's 1500 Index between the years 1995 and 2003 and their effects on turnaround success six years later (Ndofor et al., 2013). We define a company in decline as one that has two consecutive years of declining return on assets (ROA), after a base year with ROA greater than the risk free rate measured with the 6 months US T-bill (Barker III and Duhaime, 1997; Ndofor et al., 2013). We also required a negative ROA in the second year of decline (Barker III and

Duhaime, 1997; Ndofor et al., 2013). Firms with more than 500employees are chosen to eliminate the bias introduced in the study (Lim et al., 2013). Also, we limited our sample to companies that derived at least 70 percent of their revenues from their primary three-digit SIC industry to avoid pooling effects of financial data between divisions (Morrow et al., 2004; Tangpong et al., 2015). From this set, we identified 137 companies.

Our study focuses in a sample of firms implementing change during the retrenchment stage. Literature discusses two retrenchment strategies: asset retrenchment and cost retrenchment (Lim et al., 2013; Morrow Jr. et al., 2004). We selected asset retrenchers as those firms cutting total assets by more than 5% over the period of study, a six years period from the onset of decline. We also selected cost retrenchers as those firms cutting selling, general and administrative expenses (SGA) by more than 5% over the period of study (Lim et al., 2013). Our final sample included a total of 112 firms carrying out one or both types of retrenchment actions. A total of 25 companies were left out as declining firms not taking retrenchment actions.

Selection bias

Since strategic decisions (including, the decision to retrench) typically are not random and are often endogenously and there is therefore the possibility of selection bias in the sample. To control for possible sample selection bias, we implemented prior to the analysis the Heckprob procedure (Ndofor et al., 2013; Tangpong et al., 2015). As selection variables we used current ratio (measured by working capital divided by total assets), firm severity

(measured by reverse coding firm performance the year before decline started (Chen and Hambrick, 2012), leverage (operationalized as the ratio of long-term debt to total assets), capital investment intensity (measured as total assets divided by sales revenue (Tangpong et al., 2015)) and firm ROA. We used retrenchment (retrenchers = 1, otherwise 0) as selection variable (Lim et al., 2013). Using a Wald test for independence of equations (i.e., $\rho=0$), the $\chi 2$ statistic was not significant, $p= (0.84)$, indicating no evidence of selection bias. We therefore dis not account for selection bias in our analyses.

Survival bias

Once considered the treatment of selection bias, we were left with a sample of 112 retrenching companies. A total of 64 of these 112 companies achieved turnaround success, while 48 were unsuccessful. To be considered successful in turning around a firm must (1) have at least two years of increasing ROA after the two declining years of ROA, and (2) have achieved and maintained positive ROA by at least the sixth year after the base year before decline started (Ndofor et al., 2013). In the group of unsuccessful firms, some of them stopped reporting results in Compustat, thus they were classified as unsuccessful (Ndofor et al., 2013). However, all these firms reported data during our six-year period of study.

To test our hypotheses and avoid survival bias, we used a matched-pair sampling technique that is common in turnaround studies (Chen and Hambrick, 2012; Tangpong et al., 2015). The variables used to calculate the propensity score match were severity, industry ROA growth (operationalized

as the median industry ROA growth in the first year of decline (Chen, 2014); this is a variable that measures whether the cause of decline is firm or industry based), sales growth (measured by the sales growth between the year of decline and the prior year), firm ROA, R&D intensity (operationalized as R&D expenses divided by total sales (Lim et al., 2013)), leverage, firm size (calculated as the log of total assets), firm age (the log of the number of years since the establishment of the company until the year prior to decline), current ratio, quick ratio (measured as the ratio of current assets divided by current liabilities), level of distress (measured as the firm Altman´s Z-score), and time dummies. The model has a log-likelihood of -59.51 ($p<0.01$) and a pseudo R-squared of 0.17. These statistics indicate the appropriateness of the choice of independent variables and the overall fit of our model. Our final sample size was 84 firms, given we matched 42 unsuccessful firms with 42 successful firms. This sample size is reasonable compared to prior turnaround studies using matched pair sampling (Ndofor et al., 2013; Tangpong et al., 2015).

3.3.1. Variables

Dependent variable

The dependent variable is turnaround performance based on whether the firm was successful in turning around or not, as described in the "survival bias" section. The variable was binary coded '1' for successful turnaround and '0' (Ndofor et al., 2013; Tangpong et al., 2015).

Independent and moderating variables

Our explanatory variables are speed of retrenchment (speed) and rhythm of retrenchment (rhythm), as independent variables, and the firm level of distress as moderating variable. The speed of retrenchment was calculated as the count of the number of quarters that took the firm to reach 80% of the total retrenchment within the six-year period. We independently calculated the speed of asset retrenchment and the speed of cost retrenchment, standardized the values for each and added them to create our speed variable. A high figure indicates the firm has retrenched during a greater number of quarters, thus the firm followed a slower pace of retrenchment. Rhythm of retrenchment was calculated as the kurtosis of the first derivative of the variable retrenchment over the six-year period (Vermeulen and Barkema, 2002). We calculated the variable independently for asset and cost retrenchment, standardized them and added them to create our rhythm variable. A high figure indicates an irregular pace of retrenchment. Distress was measured by calculating the Altman´s Z (Altman, 1968; Latham and Braun, 2009). A lower Z-score indicates a higher level of distress.

Control variables

We used CEO change, industry ROA growth, firm age and R&D intensity as our control variables. CEO change is a binary variable indicating whether there has been a change in the CEO of the company in the two years of decline or in the first year of recovery (change CEO = 1, otherwise 0). The variable was extracted from Edgar, the US SEC database.

3.4. Results, discussion and limitations

Results

Descriptive statistics and correlations for all variables used in our model (excluding time dummies) appear in table 1. The variance inflation factors (VIFs) have been included in the table and they denote that multicollinearity is not a problem in our analyses given all the factors are far from the threshold of 10 (Aiken and West, 1991). The factor with the highest value is 1.37. To definitely exclude multicollinearity problems, all the independent variables have been mean-centered prior to the creation of the interaction terms (Aiken and West, 1991).

Table 2 reports results for our tests. Model 1 presents the control model. Model 2 presents the main effects model. Model 3 presents the results for the interaction of speed of retrenchment and firm distress, which tests our hypothesis 1. Model 4 presents the results for the interaction of rhythm of retrenchment and firm distress, which tests our second hypothesis. Based on the results of model 3, our hypothesis 1 is confirmed ($\beta = 1.04$, $p < 0.05$) showing that in high distress situations a fast pace of retrenchment improves declining firm performance. The interaction effect has been depicted in figure 2. We also found support for our hypothesis 2 based on the results showed by model 4 ($\beta = -1.21$, $p < 0.05$). Model 4 confirms that in low distress situations a regular rhythm will allow the firm to outperform. The interaction effect is depicted in figure 3.

Table 1

Descriptive statistics, vifs and correlations

Variable	*M*	*SD*	Min	Max	VIF	1.	2.	3.	4.	5.	6.	7.	8.
1. Performance turnaround	**0.50**	**0.50**	**0.00**	**1.00**		**1**							
2. Speed [b]	**0.05**	**1.18**	**-3.22**	**3.22**	**1.10**	**-0.19**	**1**						
3. Rhythm [b]	**0.01**	**1.25**	**-4.64**	**4.63**	**1.26**	**-0.13**	**0.20**	**1**					
4. Distress [b]	**0.00**	**1.00**	**-0.54**	**5.75**	**1.29**	**0.07**	**0.03**	**0.13**	**1**				
5. Age [a]	**3.36**	**1.00**	**0.00**	**5.00**	**1.37**	**0.14**	**-0.03**	**0.19**	**-0.41***	**1**			
6. CEO Change	**0.26**	**0.44**	**0.00**	**1.00**	**1.18**	**0.16**	**0.12**	**-0.29***	**-0.09**	**-0.05**	**1**		
7. R&D intendity	**0.09**	**0.09**	**0.00**	**0.79**	**1.20**	**-0.10**	**0.07**	**0.05**	**0.21**	**-0.28***	**-0.10**	**1**	
8. Industry ROA growth	**0.69**	**1.61**	**-3.05**	**5.54**	**1.18**	**0.00**	**-0.08**	**-0.14**	**-0.06**	**-0.16**	**-0.16**	**0.29***	**1**

N=84 firms. *95% significant. Temporal dummies included.

[a] Log transformed [b] These variables have been constructed with a standardized variables, thus the only information available is in a standardized format.

Table 2

Results of regression analyses

	DV: Performance turnaround			
	1	**2**	**3**	**4**
Control variables				
Firmdistress [b]	0.41+	0.42+	0.60*	1.28**
	(0.23)	(0.25)	(0.30)	(0.48)
Age [a]	0.43	0.42	0.34	0.38
	(0.28)	(0.28)	(0.29)	(0.28)
CEO Change	1.03+	1.15+	1.31+	1.02
	(0.61)	(0.68)	(0.68)	(0.69)
R&D Intendity	-3.12	-2.76	-3.87	-3.49
	(2.31)	(2.38)	(2.63)	(2.59)
Industry ROA growth	0.11	0.06	0.05	0.07
	(0.16)	(0.16)	(0.15)	(0.15)
Time Dummies	Included	Included	Included	Included
Maineffects				
Speed		-0.4+	-0.19	-0.51*
		(0.21)	(0.23)	(0.23)
Rhythm		-0.08	-0.02	-0.30
		(0.22)	(0.22)	(0.22)
Interactioneffects				
Speed X Distress (H1)			**1.04***	
			(0.44)	
Rhythm X Distress (H2)				**-1.21***
				(0.54)
Constant	-1.45	-1.48	-1.27	- 0.93
	(1.18)	(1.29)	(1.30)	(1.26)
Pseudo R-squared	12.3	15.7	18.4	18.9
Number of observations	84	84	84	84

***p<0.00; **p<0.01; *p<0.05;+p<0.1

Figure 2. Interaction plot for moderating effect of firm distress on the relationship between speed of retrenchment and Turnaround performance

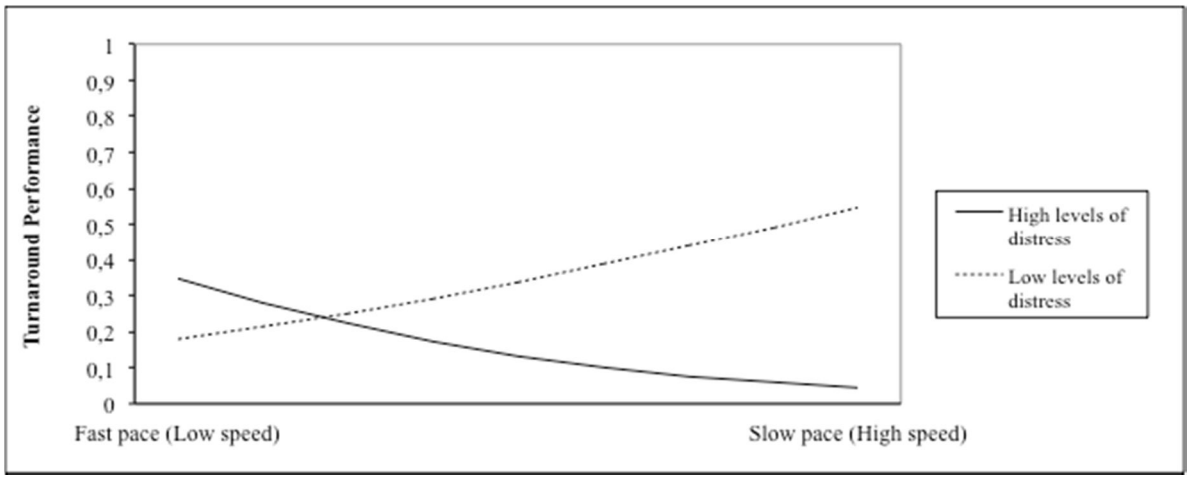
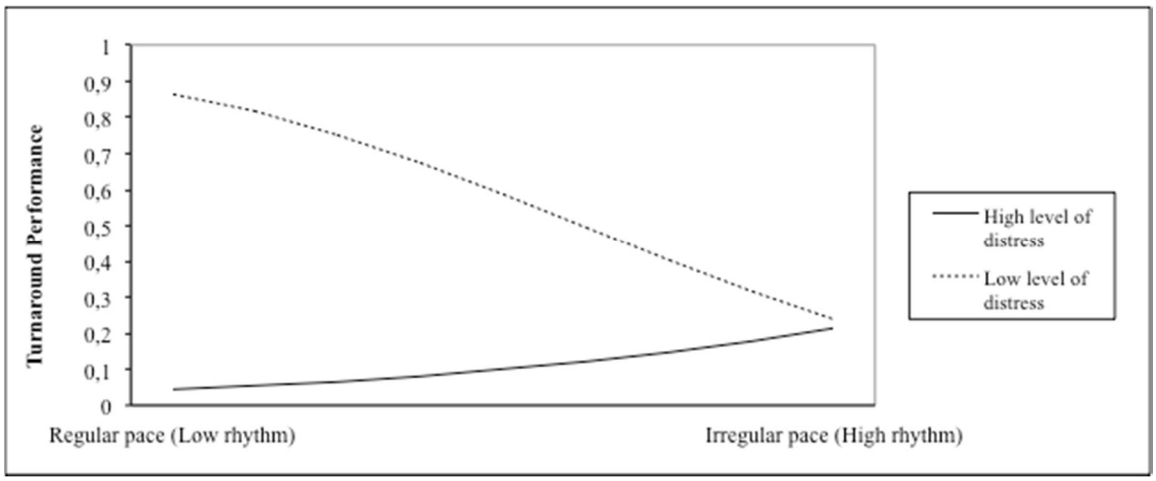


Figure 3. Interaction plot for the moderating effect of firm distress on the relationship between rhythm of retrenchment and turnaround performance



Finally, our results are consistent with the mainstream turnaround literature. First, our findings have a low level of signification, in line with

other turnaround studies using in their analyses a logistic regression methodology and turnaround performance as the binary dependent variable (Dowell et al., 2011; Ndofor et al., 2013; Tangpong et al., 2015). Second, the results from our control variables are consistent with the turnaround literature. We found CEO change and a high level of distress are significant to turnaround performance (Ndofor et al., 2013; Tangpong et al., 2015).

Robustness test

To increase the reliability of our results, we used a robustness check. We ran our model with another continuous performance variable. We choose ROA for this robustness test and calculated the variable as the difference between the ROA in year 6 and the lower ROA within the period of decline. Under a second robustness test, we calculated the speed of retrenchment as the count of quarters to reach 90%, instead of 80%, of the total retrenchment within the six-year period. Results were highly consistent with those reported here and the tests increased our confidence in the validity of our results.

Discussion

Our research was motivated by the seemingly contradictory position between turnaround and change literatures on the pace of change. The turnaround literature has traditionally posited how important time and swift action are to firm survival. However, the change literature has

showed evidence of how important a regular rhythm of change is to firm performance. The aim of our study was to reconcile both literatures by introducing the level of distress as a moderator. We find that distress moderates the pace of retrenchment declining firms should follow. Under high distress, firms should pace retrenchment fast in order to increase the likelihood for survival of the intensely deteriorated organization. In situations of low distress, declining firms will likely improve performance by following a regular rhythm of retrenchment. Regular rhythms of change, by alternating the periods of change with the periods of stability, will decrease organizational information overload and allow the firm to perform better.

Second, we also contribute to the turnaround literature by extending the literature of the temporal dimensions of turnarounds. Given how important time is to turnarounds, the topic is severely underresearched(Tangpong et al., 2015). In our research we highlight two new temporal dimensions important to turnaround success, which to the best of our knowledge, have not been studied in a turnaround context. Third, with our research, we also aim to test the boundaries of the change-stability paradox (Farjoun, 2010), as part of the change literature. The change-stability paradox has been used to support research on the temporal dimensions of change (Farjoun, 2010; Klarner and Raisch, 2013; Stadtler et al., 2010). We found that under high distress situations the change-stability paradox model is less applicable. In this

type of situation, continuous fast change is necessary if corporate collapse is to be avoided.

Our study has very straight practical implications. Managers of declining should pace retrenchment based on the level of firm distress. In situations of high distress, firms should speed up the retrenchment process regardless of firm overload. In contrast, if collapse is not a threat and distress is lower, they should pace retrenchment regularly by combining periods of intense retrenchment with those of stability.

Limitations and future lines of research

First, one of the greatest critics to turnaround research is the lack of control for the causes of distress given the great influence they exert on turnaround performance (Arogyaswamy et al., 1995; Trahms et al., 2013). Most of traditional literature has not used this type of control and only recent literature has introduced them (Chen and Hambrick, 2012; Chen, 2014; Ndofor et al., 2013). In our study, we did use the variable industry growth for that purpose (Chen, 2014). Future studies would benefit from more sophisticated variables controlling both, firm-based decline and environmental-based decline.

Second, the focus of our research is the retrenchment stage given in this stage the firm is subject to more intense changes in a shorter period of time. Future research should study the effects of the temporal dimensions during recovery, the second turnaround stage. We suspect during recovery, the influence of regularity of change on firm performance is

likely to become more important in line with the evidence showed by the change literature.

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FOURTH CHAPTER:

SHOULD DECLINING FIRMS BE AGGRESSIVE DURING TNE RETRENCHMENT PROCESS?

4.1. Introduction

Throughout the turnaround literature, the idea that turnarounds require aggressive action can be persistently found. Mythic turnaround managers such as Frank Lorenzo, Carl Icahn, or Al Dunlap are often presented as individuals fit to turnaround situations given their approach to firm decline. These individuals' traits include the ability to take ruthless, drastic, brutal, extreme, radical action (Calandro, 2011; S. Gilson, 1997; Shein, 2013). More specifically, they have been described as aggressive cost cutters. As the case of Al Dunlap shows, whether this behavior leads to turnaround success is subject to controversy (Calandro, 2011; S. Gilson, 1997). We know little about if this aggressive behavior to retrenchment leads to turnaround success. The traditional literature has overtly suggested that aggressive retrenchment leads to turnaround success (Bibeault, 1982; Hofer, 1980; Pearce II and Robbins, 2008; Pearce II and Robbins, 1993; Robbins and Pearce, 1992). However, despite the attention to aggressiveness in turnaround settings, the literature has not precisely defined aggressiveness or tested its effects on turnaround performance.

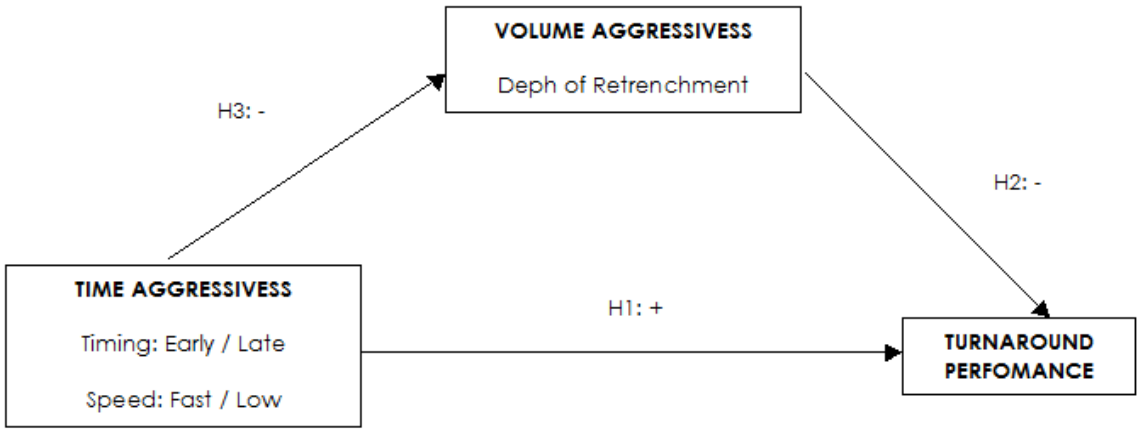
We link this turnaround literature gap with the most studied and controversial topic in turnaround research: the value of retrenchment actions (Barker and Mone, 1994; Cascio, Young, and Morris, 1997; Castrogiovanni and Bruton, 2000; Datta, Guthrie, Basuil, and Pandey, 2010; Robbins and Pearce, 1992). Retrenchment has been defined as the deliberate elimination of assets or cost reductions with the objective

of increasing firm efficiency (Lim, Celly, Morse, and Rowe, 2013). Those studies have shown evidence of how retrenchment actions both improve and hinder firm performance. As a result, prescriptions have been unclear. The most recent research has opted for advancing the subject with considerable success by analyzing contingent factors to retrenchment (Lim et al., 2013; Morrow, Johnson, and Busenitz, 2004; Tangpong, Abebe, and Li, 2015), but clear results on the direct effect of retrenchment and performance are lacking. The aim of our study is to contribute to the clarification of the value of retrenchment actions by studying retrenchment from an aggressiveness perspective.

Aggressiveness is a well-defined concept given it has been studied in several management streams (Chen, Lin, and Michel, 2010; Ferrier, Smith, and Grimm, 1999; Konig, Kammerlander, and Enders, 2013; Nadkarni, Chen, and Chen, 2016). A firm has a high degree of action aggressiveness if "it has rapidly taken a large number of actions" (Chen et al., 2010: pp. 1413). Thus, there are two dimensions to aggressiveness: the time dimension and the volume dimension (Chen et al., 2010; Nadkarni et al., 2016). We develop and study these two dimensions - volume aggressiveness and time aggressiveness- in the context of retrenchment. Time aggressiveness represents how early/late or fast/slow declining firms implement the retrenchment process. Volume aggressiveness represents how deep or shallow are the retrenchment actions implemented by declining firms. In our research, we study the

effects of time aggressiveness and volume aggressiveness on declining firm performance. Specifically, we respond to three questions: a) How do time aggressiveness and volume aggressiveness influence declining turnaround performance? b) What is the relationship between time aggressiveness, volume aggressiveness, and turnaround performance? Specifically, does volume aggressiveness mediate the relationship between time aggressiveness and turnaround performance? Our research model has been depicted in Figure 1.

Figure 1: Conceptual model



We use three perspectives to argue our hypotheses. First, the downward spiral stream is a longitudinal theory of decline, arguing that it is a process which continuously erodes a firm's resources (Hambrick and D´Aveni, 1988). Second, the threat-rigidity theory argues that decline produces managerial stress (Staw, Sandelands, and Sutton, 1981). Firm response to stress is to step up the search for information, which in turn

generates further managerial stress. Third, the survivor syndrome perspective describes the emotional and attitudinal characteristics of employees who survived retrenchment actions (Brockner, 1992; I Brockner, Grover, Reed, and Dewitt, 1992). Based on the downward spiral and threat rigidity perspectives, we argue that time aggressive firms - those firms retrenching early or fast - will shorten the decline period and, as a consequence, resource erosion and managerial stress will be reduced. Finally, the survivor syndrome perspective argues that volume aggressiveness negatively influences firm performance due to the dysfunctional effects on firm employees (Barker, Mone, Mueller, and Freeman, 1998; Brockner, 1989, 1992).

To study these questions we extract a sample of declining firms between the years 1990 and 2001 from the Compustat quarterly files. We limit our sample to those non-diversified manufacturing firms with more than 500 employees implementing retrenchment actions. Our research is designed to avoid both survival bias and selection bias (Ndofor, Vanevenhoven, and Barker, 2013; Tangpong et al., 2015; Trahms, Ndofor, and Sirmon, 2013). To avoid survival bias, based on turnaround success we match successful firms with unsuccessful ones (Ndofor et al., 2013; Tangpong et al., 2015). With a final sample of 264 firms, we perform a logit regression on our dichotomy dependent variable: turnaround performance (Ndofor et al., 2013; Tangpong et al., 2015; Trahms et al., 2013). In order to deal with selection bias, we perform a Heckman

procedure in all our regressions to prevent bias between retrenching and non-retrenching firms (Heckman, 1979).

Our results show that time aggressiveness has a positive relationship with turnaround performance. In contrast, volume aggressiveness shows a negative relationship. Hence, surviving and over performing declining firms start the retrenchment process early and carry it out fast, but they are not characterized by introducing deep cuts. Conversely, firms that start the retrenchment process late and implement slowly have a lower likelihood of survival and underperform. Finally, we find that volume aggressiveness negatively mediates the positive relationship between time aggressiveness and turnaround performance.

In sum, turnaround studies have traditionally focused with inconsistent success on the value of the volume of retrenchment. By adopting an aggressiveness perspective, we study retrenchment both from a volume and a time perspective. Studies have ignored the time dimension of retrenchment aggressiveness (Tangpong et al., 2015). Our research simultaneously deals with both dimensions and indicates that time aggressiveness is the key to understanding volume aggressiveness. The evidence found confirms the importance of the scant but emerging literature studying time and turnarounds (Tangpong et al., 2015). Our evidence contributes to the debate of retrenchment as a cause or a consequence of decline by suggesting retrenchment is an antecedent to decline. Lastly, these results represent a springboard for future

research on turnarounds by leading the way toward the study of time aggressiveness to help unblock the current controversy concerning the value of retrenchment actions.

4.2. Hypotheses

Theoretical background

Turnaround and aggressiveness

The turnaround literature has acknowledged how turnarounds require aggressive action (Bibeault, 1982; Pearce and Robbins, 1993; Whitney, 1987). Aggressiveness should inform about some actions of declining firms, such as inventory management (Shein, 2013), cash flow management (Cascio, 1993; Slatter, Lovett, and Barlow, 2006; Stadtler, Schmitt, Klarner, and Straub, 2010) and dividend reductions (John, Lang, and Netter, 1992). Most importantly, the traditional literature has both extensively suggested and bluntly acknowledged that managers should retrench aggressively (Bibeault, 1982; Pearce II and Robbins, 2008; Pearce and Robbins, 1993; Robbins and Pearce, 1992; Stadtler et al., 2010). Authors have also suggested that aggressive retrenchment generates greater gains when the situation is more severe (Hofer, 1980; Pearce II and Robbins, 1993; Robbins and Pearce, 1992), the shareholders are institutional (Bethel and Liebeskind, 1993; Datta et al., 2010), the managerial perception of decline derives from external causes (Lohrke, Ahlstrom, and Bruton, 2012) or the culture is not oriental (Bruton, Ahlstrom, and Wan, 2001). In contrast, some authors have

warned against the risks of being too aggressive (Chen, 2014). Aggressiveness should be handled in a manner to mitigate employee anxiety (Chen, 2014; Shein, 2013). Otherwise, "survivors syndrome" and the employment insecurity feelings of employees may counteract the benefits of the aggressive retrenchment action (Brockner et al., 1992). As balance should be achieved in the degree of aggressiveness in order to gain employee co-operation (Slatter et al., 2006). Despite the attention to retrenchment aggressiveness, the literature has not precisely defined or tested the concept.

Aggressiveness is a concept found in diverse parts of the management literature, such as innovation (Konig et al., 2013) or strategy (Ferrier, 2001). It has been mostly developed in the competitive dynamic stream to study competitive behavior and the reactions to competitive moves (Chen et al., 2010; Ferrier et al., 1999; Ferrier, 2001; Nadkarni et al., 2016). Authors of this stream have used several dimensions to define and set the boundaries to action aggressiveness (Ferrier et al., 1999; Smith, Ferrier, and Ndofor, 2001). Nevertheless, as the literature has evolved, aggressiveness has converged in two main dimensions. A firm has a high degree of action aggressiveness if "it has rapidly taken a large number of actions" (Chen et al., 2010: pp. 1413). Thus, action aggressiveness possesses two dimensions: the volume dimension and the time dimension (Chen et al., 2010; Ferrier, 2001; Nadkarni et al., 2016). Next,

we define retrenchment aggressiveness and develop the two dimensions defining the concept.

Most turnaround studies have recognized the value of the two-stage turnaround model proposed by Robbins and Pearce (1992)(Lim et al., 2013; Morrow, Johnson, and Busenitz, 2004; Tangpong et al., 2015). The model posits that turnarounds require two stages - retrenchment and recovery - to achieve the survival and profitability of declining firms. The objective of the former stage is firm survival and cash flow generation, whereas the aim of the latter is firm profitability and growth (Pearce II and Robbins, 1993; Trahms et al., 2013). The first stage is more efficiency seeking and less strategic, whereas the second stage is more strategic. Retrenchment is defined as deliberately eliminating assets or reducing costs with the objective of increasing a firm's efficiency (Lim et al., 2013).

We define retrenchment aggressiveness as the volume of retrenchment action taken by declining firms over time. Therefore, retrenchment aggressiveness consists of two dimensions: retrenchment time aggressiveness and retrenchment volume aggressiveness (hereinafter, time aggressiveness and volume aggressiveness). The turnaround literature has acknowledged volume aggressiveness (Barker and Mone, 1994; Robbins and Pearce, 1992) and time aggressiveness (Bibeault, 1982; Hofer, 1980; Pearce and Robbins, 1993; Shein, 2013; Tangpong et al., 2015) as relevant to turnaround success. We find in the turnaround literature a distinctive degree of support for the value of each of the two

dimensions. First, volume aggressiveness has been studied at length. Yet the value of volume aggressiveness has been subject to controversy given the mixed results obtained by the studies, which are split in terms of evidence (Barker and Mone, 1994; Wayne F. Cascio et al., 1997; Pearce II and Robbins, 1993). Second, though the literature has shown scant evidence of the temporal dimension (Tangpong et al., 2015), it has strongly suggested its importance (Bibeault, 1982; Hambrick and D´Aveni, 1988; Pearce and Robbins, 1993; Weitzel and Jonsson, 1989). Finally, literature has not studied the relationship between volume aggressiveness and time aggressiveness, neither their joint relationship with performance.

Hypotheses

Time aggressiveness

Time is critical to decline because it can itself influence the outcomes of a turnaround (Bibeault, 1982; Hambrick and D´Aveni, 1988; Tangpong et al., 2015; Weitzel and Jonsson, 1989; Whitney, 1987) and is, along with financial slack, one of the two main elements of a successful turnaround (Hambrick and D´Aveni, 1988; Pearce and Robbins, 1993; Zimmerman, 1991). Time research has highlighted several dimensions of organizational change, such as timing, frequency, rhythm and speed (Ancona, Goodman, Lawrence, and Tushman, 2001; Huy, 2001). The turnaround literature specifically cites two of these as critical: timing and speed. Timing is defined as the moment an event is initiated or is

planned to be initiated (Huy, 2001). The timing of retrenchment is then the moment the retrenchment process is begun. Although there is little evidence to support it, an extensive literature exists which suggests that a turnaround, and more specifically, the retrenchment process should be initiated early rather than later (Tangpong et al., 2015; Weitzel and Jonsson, 1989). Speed can be defined as the amount of time that a firm requires to complete an action or a process (Chen and Hambrick, 1995; Vermeulen and Barkema, 2002). A retrenchment process has a duration which refers to the "longevity" required to complete this process (Pearce and Robbins, 1993: pp. 663). The speed of retrenchment refers to how large or small the duration of the retrenchment process is. That is, how fast or slow the retrenchment process is implemented. Likewise, there is also an extensive literature suggesting how speed of action is key to turnaround (Arogyaswamy, Barker, and Yasai-Ardekani, 1995; Bibeault, 1982; Dowell, Shackell and Stuart, 2011; Pearce and Robbins, 1993). Competitive dynamic studies have defined the time dimension of aggressiveness solely in terms of one variable: the speed of competitive action (Chen et al., 2010; Nadkarni et al., 2016). Nonetheless, given that the turnaround literature has overtly posited the importance of both timing and speed for turnaround success, we will use these two in order to define time aggressiveness. Then, time aggressive firms are those starting the retrenchment process early (timing) and/or completing the retrenchment process fast (speed).

The downward spiral is an influential turnaround stream arguing that decline is a protracted process throughout which firm resources are eroded (Hambrick and D´Aveni, 1988). Decline acts as a process continuously eroding both internal resources (Hambrick and D´Aveni, 1988, 1992; Sutton, Eisenhardt, and Jucker, 1986) and external resources (Gilson, John, and Lang, 1990; Pajunen, 2006). For example, decline erodes financial, human and reputational resources (Barker III and Duhaime, 1997; Filatotchev and Toms, 2006; Gilson et al., 1990; Hambrick and D´Aveni, 1992; Pajunen, 2006). This perspective argues that declining firms can avoid firm demise as long as they possess a minimum stock of resources available to cope with decline. These resources can either be provided by the environment or possessed by the company itself (Hambrick and D´Aveni, 1988). In short, a declining firm will avoid bankruptcy as long as resources are available from either source. A second seminal turnaround stream is the threat-rigidity theory (Staw et al., 1981). This theory argues that, subject to a process of decline, managers incur in stress and anxiety. The managers' response to stress will be to increase the search for information. An increase in the search for information will further impair their ability to process information due to information overload, provoking further stress.

Based on the premises of the downward spiral and the threat-rigidity perspectives, time aggressive firms will be able to avoid the negative consequences of decline. First, time aggressive firms starting the

retrenchment process early will be able to avoid an extended downward slide process and, consequently, avoid excessive resource deterioration. Similarly, time aggressive firms executing an early retrenchment process will be able to avoid an extended period of decline and prevent managers from bringing excessive levels of managerial stress upon themselves. Second, time aggressive firms implementing the retrenchment process fast will shorten the period of decline. A shorter period of decline will avoid excessive levels of resource deterioration and excessive levels of decline-induced stress. To sum up, time aggressive firms, by avoiding excessive levels of resource deterioration or excessive levels of managerial stress, will over-perform. As a result, we can formally state:

Hypothesis 1: Time aggressiveness will be positively related to performance turnarounds.

Volume aggressiveness

Volume aggressiveness refers to the amount of retrenchment that declining firms carry out during the retrenchment process; that is, the depth of the cuts. Turnaround studies have shown controversial results on the effect of volume aggressiveness. Some authors have shown evidence that declining firms using retrenchment measures achieve superior returns (Hambrick and Schecter, 1983; Hofer, 1980; Schendel, Patton, and Riggs, 1976; Zimmerman, 1991), regardless of the cause of decline (Robbins and Pearce, 1992). Other authors have found that

volume aggressiveness does not offer performance benefits based on the dysfunctional effects on the firm's employees and culture (Barker et al., 1998) and the lack of strategic change (Barker III and Duhaime, 1997; Ndofor et al., 2013). Finally, some authors have suggested a curvilinear inverted U-shape relationship between retrenchment and performance, given that extreme firm behavior - either inaction or hyper-action - leads to underperformance (Hambrick and D´Aveni, 1988), and one study found evidence of this shape (Schmitt and Raisch, 2013).

In the absence of moderators, most leading evidence points to a negative or no effect relationship between volume aggressiveness and firm performance (Barker and Mone, 1994; Boyne and Meier, 2009; Castrogiovanni and Bruton, 2000), quality, productivity and effectiveness (Cameron, Freeman, and Mishra, 1991), sales growth (Wayhan, 2000) and stock market reaction (Lee and Goizueta, 1997; Nixon, Hitt, Lee, and Jeong, 2004). The survivor syndrome perspective supports the benefits of volume aggressiveness being likely to be reduced by the dysfunctional effects of the attitudes and behaviors of the remaining employees in response to retrenchment (Barker et al., 1998; Brockner, 1989; Morrison and Robinson, 1997). First, the remaining employees will probably reduce their commitment as a result of a perceived lack of commitment by the organization itself and a violation of the psychological contract (De Meuse, Bergmann, Vanderheiden, and Roraff, 2004; Morrison and

Robinson, 1997). They are likely to incur in dissension due to a situation which they feel that they have not created and a situation which they perceive management is responsible for (Weitzel and Jonsson, 1989). Second, feelings of frustration, stress, anger and anxiety arise in the remaining employees given the lower number of employees left to perform the increasing workload (Brockner, 1992; Brockner, 1988; Cameron et al., 1991). Additionally, because of the costs and assets reductions, they have fewer resources available to do their job. They will also feel guilty as they continue to have jobs while coworkers do not (Brockner, 1989). Third, job insecurity leaves employees demoralized and demotivated (Brockner, 1992; Brockner, 1988). Those employees with marketable skills and connections are likely to leave (Barker and Mone, 1994; Sutton et al., 1986), resulting in a loss of human capital and firm knowledge (Cascio and Wynn, 2004; Iverson and Zatzick, 2011; Schmitt, Borzillo and Probst, 2012).

In short, volume aggressive firms will find themselves operating with an uncommitted, anxious and demotivated workforce doing their job with a lower asset support and, therefore, they decrease the likelihood of the firm's survival or firm performance[3]. Thus, we propose:

[3] Some authors have argued that volume aggressiveness fails to work because it involves no strategic change (Barker & Mone, 1994; Ndofor et al., 2013). This is unlikely because, as a part of the literature has argued, retrenchment involves a change in the firm's scope (Arogyaswamy et al., 1995; Boyne & Meier, 2009; Freeman & Cameron, 1993). Retrenchment involves a reduction of costs and assets. Specifically, during retrenchment firms reduce or eliminate divisions, geographic areas, lines of business, products, SKUs, etc. Any of these reductions represent a form of strategic choice, even one which is negative. This type of choice is not less important given that "strategy renders choices about what not to do as important as choices about what to do" (Porter, 1996: p.18).

Hypothesis 2: Retrenchment aggressiveness in volume will be negatively related to performance turnarounds.

Mediation by volume aggressiveness between time aggressiveness and turnaround performance

As argued, the downward spiral stream posits that decline is a process which continuously depletes firm resources over time (Hambrick and D´Aveni, 1988) and deteriorates both internal and external resources (Gilson et al., 1990; Hambrick and D´Aveni, 1992; Pajunen, 2006; Sutton and Callahan, 1987). First, less time aggressive firms initiating the retrenchment process later (timing) will find themselves in a worse state as the decline resource erosion process becomes more extended. As a consequence of their worse state, once they decide to act, they will need to be more volume aggressive to reverse a worse situation than the firm would have had if it had initiated retrenchment earlier. This, as argued earlier, leads the firm to underperform. Conversely, those time aggressive firms initiating retrenchment actions earlier will be able to avoid excessive levels of deterioration. A less deteriorated firm will need to introduce less deep, more shallow cuts, in this way becoming less volume aggressive. Less volume aggressive firms perform better.

Second, a more time aggressive firm carrying out the retrenchment process faster (speed) will shorten the period during which the firm is in decline. If the period of decline is shorter, the depletion of firm resources due to decline will be lower and the firm will be less deteriorated. A

more time aggressive, less deteriorated firm will need to be less volume aggressive to conduct a turnaround which will lead it to perform better.

In summary, the effect of volume aggressiveness on performance is part of a sequence. In the first step, the degree of volume aggressiveness is determined by how early the retrenchment process starts or how fast it is being done. In the second step, volume aggressiveness determines performance. Therefore, we posit:

Hypothesis 3: Volume aggressiveness mediates the relationship between time aggressiveness and turnaround performance.

4.3. Methodology

Data and sample

Our aim is to study established firms in a situation of decline involved in retrenchment processes. We drew our sample from the Compustat database quarterly files to select declining firms between the years 1990 and 2001 and their effects on turnaround success six years later (Ndofor et al., 2013), leaving out the period of economic crisis that began in 2008 from our analyses. We define a company in decline as one that has two consecutive years of declining return on assets (ROA), after a base year with ROA greater than the risk free rate measured with the 6 months US T-bill (Barker III and Duhaime, 1997; Ndofor et al., 2013). We also required a negative ROA in the second year of decline (Barker III and Duhaime, 1997; Ndofor et al., 2013). Selected companies in our sample are

characterized by employing more than 500 employees the base year, thus eliminating small and medium-sized enterprises (Lim et al., 2013). Also, we limited our sample to companies that derived at least 70 percent of their revenues from their primary three-digit SIC industry to avoid pooling effects of financial data between divisions (Morrow et al., 2004; Tangpong et al., 2015). Finally we chose firms operating in SIC industries 2000-3999; that is, manufacturing firms (Barker III and Duhaime, 1997; Morrow et al., 2004).We identified 433 companies from this set.

Our object of analysis and study is the effects of retrenchment time aggressiveness and volume aggressiveness on the performance of declining firms. Therefore, we singled out firms involved in retrenchment processes. The literature discusses two retrenchment strategies: asset retrenchment and cost retrenchment (Lim et al., 2013; Morrow et al., 2004). We selected asset retrenchers as those firms cutting total assets by more than 5% over the period of study (Lim et al., 2013), a sixyear period from the onset of decline. We also selected cost retrenchers as those firms reducing selling, general and administrative expenses (SGA) by more than 5% over the period of study. We identified 347 companies implementing either asset retrenchment or cost retrenchment measures. This accounts for 80.14 % of the total sample of companies.

Selection bias

Since strategic decisions (such as the decision to retrench) are typically not random and are often endogenously linked to other organizational

variables, there is a possibility of sample selection bias. Our empirical setup only allowed us to observe cases where retrenchment occurred. To control for possible sample selection bias, we implemented the Heckman procedure prior to the analysis (Ndofor et al., 2013; Tangpong et al., 2015). In the first stage, we ran a Probit analysis to demonstrate the existence of selection bias through the Wald test for independence of equations. We regressed the retrenchment dummy (retrenchers = 1, otherwise 0) on organizational and industry predictors. Specifically, we used severity measured by reverse coding firm performance of the year before decline started (Chen and Hambrick, 2012), the level of distress (measured as the firm's Altman Z-score), the quick ratio (measured as (current assets – inventories) / current liabilities), the firm's size (calculated as the log of employees), the leverage (operationalized as the ratio of long-term debt to total assets), the firm's ROA, the firm's age (the log of the number of years from the establishment of the company until the year prior to its decline), CEO change (a binary variable indicating whether there has been a change in the company's CEO during the two years of decline or the first year of recovery (change CEO = 1, otherwise 0)) and year dummies. To successfully control for the selection bias, at least one independent variable needs to be identified that is associated with the dependent variable in the first-stage model, but is not related to the dependent variable in the second-stage model analysis. This variable is severity. This is highly correlated with the retrenchment dummy variable, but very little correlated with the

independent variable in the model - performance turnaround. An inversed Mills ratio was generated in the first-stage model, and then included in the second-stage analysis as an instrumental variable (lambda) to correct for any selection bias (Heckman, 1979). The overall results are not significantly altered, suggesting that endogeneity is not a major concern, since the lambda variable is not significant in the analysis model. After having considered the treatment of selection bias using lambda as a variable for control, we are left with the sample of 347 companies carrying out retrenchment actions. The model (lambda) has a log-likelihood of -183.86 ($p<0.001$) and a pseudo R-squared of 0.08.

Survival bias

Within this group of 347 retrenching companies, some are successful in turning around and others are not. To be considered successful in turning around a firm must (1) have at least two years of increasing its ROA after its two years of decline, and (2) have achieved and maintained a positive ROA by at least the sixth year after the base year before its decline started (Ndofor et al., 2013). In the group of unsuccessful firms, some of them stopped reporting results in Compustat, hence they were classified as unsuccessful (Ndofor et al., 2013). Of the firms that were classified as non-successful, several patterns of performance existed (Ndofor et al., 2013). First, some firms continued in existence but failed to achieve or maintain the upturn in their ROA necessary to be classified as a turnaround firm. Second, firms that

stopped reporting results on Compustat after declining were investigated. If these firms declared bankruptcy, were liquidated, delisted by stock exchanges, or acquired while still unprofitable, we classified them as nonturnarounds. This inclusion of firms that went bankrupt or disappeared after declining addresses one of the key criticisms of sample selection in turnaround studies: survival bias (Barker and Mone, 1994).

To test our hypotheses and avoid survival bias, we used a matched-pairs sampling technique that is common in turnaround studies (Chen and Hambrick, 2012; Tangpong et al., 2015). To do so, we used propensity score matching by employing the Stata code psmatch2. We needed to identify comparison targets between successful and unsuccessful companies. The variables used to calculate the propensity score matching were the level of distress, the current ratio, the quick ratio, the firm's size, the firm's ROA, the sales growth (measured by the sales growth between the year of the decline and the prior year) and year dummies. The model has a log-likelihood of -190.23 ($p<0.1$) and a pseudo R-squared of 0.10. These statistics indicate the appropriateness of the choice of independent variables and the overall fit of our model. Our final sample size was 264 firms, based on the match of 132 unsuccessful firms with 132 successful firms. This sample size is reasonable compared to prior turnaround studies using matched-pairs sampling

(Ndofor et al., 2013; Tangpong et al., 2015). The procedure used is valid for the final sample testing of the hypotheses.

The financial data was collected from the Compustat North American Database. The agency variables (CEO change and board size) were extracted from annual reports and proxy statements filed with the U.S. Securities and Exchange Commission (Edgar database at www.sec.org).

4.3.1. Variables

Dependent variable

To test our hypotheses we used a dummy variable. Our dummy variable is turnaround performance and is based on whether the firm was successful in turning around or not, as described in the "survival bias" section. The variable was binary coded '1' for a successful turnaround and '0' for an unsuccessful turnaround (Hambrick and D´Aveni, 1992; Ndofor et al., 2013; Tangpong et al., 2015).

Independent variables

The independent variables in this study are related to the two dimensions of retrenchment aggressiveness: time aggressiveness and volume aggressiveness (Nadkarni et al., 2016). Time aggressiveness is calculated as the sum of the timing of the retrenchment and the speed of the retrenchment. The timing of the retrenchment is calculated by standardizing and adding the timing of asset retrenchment and the timing of cost retrenchment. The speed of retrenchment is calculated by

standardizing and adding the speed of asset retrenchment and the speed of cost retrenchment. The timing of each - asset retrenchment and cost retrenchment - is calculated as the number of quarters spanning the quarter in which asset retrenchment or cost retrenchment is initiated and the last quarter of the base year. Second, the speed of asset retrenchment and the speed of cost retrenchment is calculated as the number of quarters between the initiation of the retrenchment process (timing) and the time period in which the firm reached 80% of the total amount retrenched during the six-year study period .

Volume Aggressiveness is calculated as the sum of the standardized values of asset retrenchment and cost retrenchment. Each, asset retrenchment and cost retrenchment, is calculated as the total drop of assets (total assets) or total drop of costs (SGA) in the six-year period. To facilitate the interpretation of the coefficient sign for time aggressiveness, we reverse-coded the variable, so that greater coefficients indicate a greater degree of time aggressiveness.

Control variables

We used the level of distress, the firm's size, the capital intensity (the fixed assets divided by the number of employees), the firm's age, CEO change, board size (the number of members on the board of directors). We also included a proxy for causes of decline to determine whether the decline had a firm or environmental nature (Causes of decline). Its calculation is given by the expression ROA sector (year 1) - ROA firm

(year 1) (Chen, 2014). The inverse Mills ratio (lambda) and temporal dummies are also introduced in the analysis models.

4.4. Results, discussion and limitations

Results

Descriptive statistics and correlations for all variables used in our model (excluding time dummies and lambda) appear in table 1. Table 2 reports the results for our analyses.

To test hypotheses 1 and 2, we used binary logistic regression analyses. To test hypothesis 3, we employed OLS. Model 1 is the control model for hypotheses 1 and 2. Model 5 is also the control model for hypothesis 3. Model 2 presents the results for testing hypothesis 1 and confirms it ($\beta = 0.31$, $p < 0.01$) having a positive and significant coefficient. To test hypothesis 2, we estimated Model 3, confirming it ($\beta = -0.44$, $p < 0.01$) as negative and having a significant coefficient.

Hypothesis 3 argues that volume aggressiveness mediates the relationship between time aggressiveness and turnaround performance. A mediation effect requires three conditions (Baron and Kenny, 1986; MacKinnon, Fairchild and Fritz, 2007). First, the independent variable must have a significant effect on the dependent variable. Model 2 provides support for this condition. Second, the mediator must be explained by the independent variable. Model 6 upholds this condition ($\beta = -0.19$, $p < 0.01$). Third, the independent variable must have a

significant effect on the dependent variable after the effect of the independent variable is controlled for. As part of this condition, it is also necessary for the coefficient associated with the independent variable to decrease. Model 4 supports this condition ($\beta = -0.40$, $p < 0.01$). We also performed a Sobel test (Sobel, 1982) on the model with significant results ($Z = 2.23$; $p < 0.05$). The results of the mediation analysis uphold partial mediation because entering volume aggressiveness reduces the strength of the effects of time aggressiveness on turnaround performance (from $p < 0.01$ to $p < 0.05$).

Table 1

Descriptive statistics and correlations

Variable	*M*	*SD*	Min	Max	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Turnaround Performance	**0.50**	**0.50**	**0.00**	**1.00**	**1**									
2. Time Aggressiveness [b]	**0.00**	**1.20**	**-4.92**	**3.39**	**0.17***	**1**								
3. Volume Aggressiveness [b]	**0.00**	**1.27**	**-2.52**	**6.34**	**0.19***	**0.22***	**1**							
4. Zscore	**3.75**	**2.80**	**-3.59**	**18.94**	**-0.05**	**-0.03**	**0.13***	**1**						
5. Employees [a]	**5.65**	**10.61**	**0.50**	**88.5**	**-0.03**	**-0.03**	**0.18***	**-0.08**	**1**					
6. Capital Intensity	**0.07**	**0.08**	**0.01**	**0.62**	**-0.00**	**0.05**	**0.15***	**0.01**	**-0.02**	**1**				
7. Age [a]	**3.27**	**1.03**	**0.00**	**5.28**	**0.16***	**0.01**	**-0.11**	**0.18***	**0.25***	**-0.07**	**1**			
8. CEO Change	**0.69**	**0.46**	**0.00**	**1.00**	**0.05**	**-0.03**	**-0.05**	**-0.03**	**-0.01**	**0.05**	**0.06**	**1**		
9. Board Size	**9.19**	**3.29**	**3.00**	**21.00**	**-0.07**	**0.04**	**0.19***	**0.13***	**0.30***	**0.07**	**0.13***	**0.02**	**1**	
10. Causes of decline	**28.00**	**121.74**	**-693.6**	**1650.61**	**-0.12**	**-0.01**	**0.03**	**-0.08**	**-0.05**	**0.03**	**0.03**	**0.05**	**-0.10**	**1**

N=264 firms. *95% significant. Temporal dummies included.

[a] Log transformed. [b] These variables have been constructed with standardized variables.

Table 2

Results of regression analyses

DV: Turnaround performance (1-4)
DV: Volume aggressiveness (5-6)

	1	2	3	4	5	6
Control variables						
Zscore	-0.01	-0.01	0.05	-0.04	-0.07*	-0.07**
	(0.05)	(0.06)	(0.06)	(0.06)	(0.03)	(0.07)
Employees [a]	-0.02	-0.01	0.02	-0.02	-0.01**	-0.01**
	(0.02)	(0.01)	(0.01)	(0.01)	(0.00)	(0.00)
Capital Intensity	1.21	0.91	0.05	-0.13	2.63**	-2.43**
	(1.73)	(1.71)	(1.69)	(1.69)	(0.83)	(0.80)
Age [a]	0.36*	0.36*	0.32*	0.33*	- 0.13	0.12
	(0.16)	(0.16)	(0.15)	(0.16)	(0.08)	(0.08)
CEO Change	0.17	0.21	0.08	0.13	-0.19	-0.21
	(0.30)	(0.30)	(0.31)	(0.31)	(0.17)	(0.16)
BoardSize	-0.06	-0.07	-0.09*	-0.10*	-0.07*	-0.06*
	(0.05)	(0.05)	(0.05)	(0.05)	(0.03)	(0.26)
Causes of decline	-0.01	-0.01	-0.01+	-0.01+	-0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Lambda	0.06	-0.12	0.49	-0.55	-1.12	-0.99
	(1.04)	(1.03)	(1.14)	(1.12)	(0.69)	(0.67)
Time dummies	Included	Included	Included	Included	Included	Included
Main effects						
Time Aggressiveness		**0.31**** **(0.12)**		**0.24*** **(0.12)**		**-0.19**** **(0.07)**
VolumeAggressiveness			**- 0.44**** **(0.15)**	**- 0.40**** **(0.15)**		
Constant	0.06	0.01	0.77	0.66	2.61	2.42**
	(0.98)	(0.98)	(0.97)	(0.98)	(0.77)	(0.72)
Pseudo R-squared	9.6+	11.48*	12.98*	14.11***	17.44***	20.54***
Number of observations	264	264	264	264	264	264

***p<0.00; **p<0.01; *p<0.05;+p<0.1

Robustness test

First, the early literature on aggressiveness often included a third dimension of aggressiveness which is aggressiveness complexity (Ferrier, 2001). Aggressiveness complexity includes the range of different action types which the firm uses (Ferrier, 2001). With our dependent variable we tested the effects of aggressiveness complexity, measured as whether a firm uses one type of retrenchment (either assets or cost) or both types, . The results were not significant. Consistent with the latest aggressiveness studies we decided to eliminate this type (Chen et al., 2010; Nadkarni et al., 2016). Second, we operated a similar procedure to Ndofor et al.'s (2013) and Wiersema and Zhang's (2011). Instead of introducing CEO change as a control variable, we calculated a proxy for CEO replacement by regressing CEO replacement on base performance, and extending the decline and year dummies (Ndofor et al., 2013). We did not obtain results which were significantly different to those reported. Finally, to calculate the time aggressiveness variable we used a different percentage of completion to the one used to calculate the speed of retrenchment. We used 90% completion of the total amount of retrenchment implemented. The results were not significantly different to the ones reported here.

Discussion

This study focuses on the relationship between retrenchment aggressiveness and turnaround performance. We independently

analyze the effects of time aggressiveness and volume aggressiveness on the performance of declining firms. Using downward slide and threat-rigidity, we argue and find that time aggressiveness shows a positive relationship with turnaround performance. We also posit and find that, from the survivor syndrome perspective, volume aggressiveness has a negative effect on turnaround performance. Finally, we find that volume aggressiveness mediates the relationship between time aggressiveness and turnaround performance.

Theoretical implications

We contribute to improving the understanding of the performance implications of retrenchment in three ways. First, our most important contribution is related to the long unresolved debate over retrenchment as a cause of turnaround performance or a consequence of decline. Two seminal papers during the 90s debated about whether retrenchment improves performance or whether decline is an antecedent to retrenchment (Barker and Mone, 1994; Robbins and Pearce, 1992). Those studies hardly considered the effects of the time dimension on the results. The inclusion of the time dimension on the analyses helps shed light on the controversy over the value of retrenchment and our research contributes to this debate. More specifically, by developing the concept of retrenchment aggressiveness and dividing the analysis of retrenchment in both dimensions, time aggressiveness and volume aggressiveness, the results become clearer.

Our evidence suggests that retrenchment is a cause of turnaround performance when the firm acts time aggressively. Our results also show that retrenchment is a consequence of decline because volume aggressiveness is a lag to time aggressiveness. Time unaggressive firms, which delay the initiation of retrenchment and extendthe decline process, are forced at a later stage to step up retrenchment and increase volume aggressiveness. Then, our results are in line with recent studies arguing the path dependent pattern of the retrenchment-turnaround relationship (Tangpong et al., 2015). Retrenchment has a path dependent pattern toward turnaround performance. Our results contribute to the pattern by showing evidence of how the pattern is staged in two steps. In the first step, time aggressiveness is an antecedent of volume aggressiveness. In the second step, volume aggressiveness is an antecedent to turnaround performance. In sum, the pattern has an antecedent - time aggressiveness - is mediated by volume aggressiveness and has an effect on turnaround performance.

Second, we test one of the most extended myths in the turnaround literature, which argues that declining firms need to be aggressive. We provide a framework to analyze firm aggressiveness in a decline setting. We develop the retrenchment aggressiveness concept by distinguishing between time aggressiveness and volume aggressiveness. We show that the ruthless aggressive cost-cutter turnaround manager who successfully drives the firm to survival is a stereotype which does not fit with the

evidence. Volume aggressive managers will drive the firm to underperformance. Only when retrenchment is handled in a time aggressive manner will declining firms increase their results. In this sense, our evidence is also indirectly in agreement with recent research on the personality and behavior of CEOs in charge of troubled firms (Tang and Crossan, 2016).

Third, we contribute to the scant but recent research stream on the value of time in a turnaround setting (Tangpong et al., 2015). We show that retrenchment time aggressiveness improves firm performance. Also, our results are consistent with the most widespread turnaround literature, again showing evidence that, in the absence of contingencies, volume retrenchment negatively impacts firm performance (Barker and Mone, 1994; Cascio, 1993).

Practical implications

For investment managers of distressed funds, our study reveals that in their search for opportunities to profit from, they will find more value if they focus on opportunities in the stages of early decline. Once in, they will need to be time aggressive by starting early and implementing fast retrenchment measures. Conversely, the likelihood of achieving the successful turnaround of a firm in the last stages of its decline is slim. During the last stages, the management's alternative is to become volume aggressive, which our and past evidence suggests is a recipe for underperformance. If they decide to acquire distressed firms in the last

stages of decline, the transaction should be priced to reflect the high risk of underperformance of a volume aggressive retrenchment strategy.

Similarly, chief restructuring officers assessing whether to take on a turnaround mandate should consider that turnaround overperformance requires a time aggressive behavior, combined with a volume unaggressive behavior. A volume aggressive behavior leads the declining performance to an unsuccessful turnaround. As a result, they will need to follow a low volume aggressive strategy. Further, this alternative is only feasible if they have the option to become time aggressive; in other words, if the firm is not in an advanced decline stage. Finally, our evidence is to be added to the long list of research suggesting that tackling turnarounds early and fast is required to avoid future deeper problems.

Limitations and future lines of research

A major concern in turnaround studies is control over environmental/firm-based decline. This type of control has been the major criticism of authors. Over the years, the literature has struggled to find an effective form of control. Unfortunately, in a non-questionnaire research design, the control of the causes will always be a limitation. In our research we have included a type of control for the kind of decline - industry profit growth - although a better form of control would have been desirable.

Our study has been built using two dimensions of aggressiveness, time and volume. The aggressiveness literature has studied other dimensions, such as breadth. Despite our not finding significant results in the preliminary analysis of breadth, the future literature should focus on this dimension. Ideally, researchers should define breadth aggressiveness and establish a finer-grain measure using a wide range of retrenchment actions (SGA, employee, fixed assets, current assets, reductions, etc.). One very interesting and ideal line of research would be to study the variation in the strategic position of the firm in distress based on the time and volume of aggressiveness. These studies would deal with how strategy changes when firms have not been time/volume aggressive compared with when they actually have behaved in this way.

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FIFTH CHAPTER:

SUMMARY AND CONCLUSIONS, CONTRIBUTIONS, LIMITATIONS AND FUTURE RESEARCHES

5.1. Summary and conclusions

The turnaround literature has consistently argued (Arogyaswamy et al., 1995; Bibeault, 1982; Grinyer and Spender, 1988; Slatter et al., 2006) and shown evidence (Tangpong et al., 2015) that time issues are critical. The temporal dimensions of timing, speed and rhythm are used in this work. We conclude these discussions by extending this time to the study of the influence of the environment or the firm distress, while defining aggressiveness in situations of decline in turnaround processes. The different hypotheses are tested empirically, studying the moderation of munificence, dynamism and firm distress. Similarly, the concept of aggressiveness is introduced in terms of time and volume directly or via performance in the turnaround effect. The results suggest and confirm the hypotheses, supporting the downward spiral and threat-rigidity perspectives.

5.2. Contributions

This research work analyzes the contingency of several factors on the temporal dimensions of retrenchment in turnaround processes. It has performed three studies. These analyze an area not investigated in the turnaround literature, responding to how these dimensions affect the performance, success and survival of businesses in decline, the interfacing of the temporal dimensions of retrenchment with the environment and the distress of the company. Similarly, we define aggressiveness in the turnaround literature and see how it affects

aggressiveness in time and volume performance, success or the survival of businesses in decline.

In the first study, we contribute globally to two aspects. Our results suggest that the environmental conditions are an important moderator to the temporal dimensions of retrenchment those assumptions. We show that the environmental conditions strongly moderate the timing, speed and rhythm of retrenchment and align with the literature, arguing the need of adapting the process to the environmental forces. The importance of the environment for the performance of firms in decline being restricted in terms of munificent and dynamic actions of retrenchment through temporal dimensions is confirmed. The empirical results and robustness checks confirm that:

- Munificence of the environment positively moderates the relationship between an early retrenchment and turnaround performance. Dynamism of the environment negatively moderates the relationship between early retrenchment time and turnaround performance.
- The dynamism of the environment positively moderates the relationship between the speed of retrenchment and turnaround performance.
- Dynamism and munificence of the environment positively moderate the relationship between an irregular rhythm of retrenchment and turnaround performance.

In the second study, the results confirm the hypotheses, while being consistent with the body of literature on turnaround. We can therefore state that a rapid process of retrenchment in a situation of decline with a high degree of distress determines a greater probability of higher performance, while a regular process of retrenchment in a situation of decline with low distress determines the likelihood of a higher performance.

Finally in the third study, the first aspect to highlight is the importance of developing the concept of aggressiveness in the turnaround literature, not only in terms of volume as has been done until now, but also in terms of time. From this point of view, the empirical results and robustness tests reinforce the hypothesis proposed. The result is that temporary aggressiveness positively impacts turnaround performance, and aggressiveness in volume has a negative impact on turnaround performance. Complementarily, this forms a mediating effect between aggressiveness in volume and aggressiveness in time. This determines that aggressiveness in volume negatively antecedes the relationship between aggressiveness in time and turnaround performance.

5.3. Limitations and future lines of researches

This work has some limitations, which should be noted. Generally the main limitation of studies is that we focus on the retrenchment stage only - the first stage of a turnaround. Future research should study the effects of the temporal dimensions during the recovery stage. Other aspects

that limit the study are relative to the sample, focusing on the American market and excluding small and medium enterprises. Future studies could include other markets and focus on these firms. The specific limitations of each case have been discussed in each chapter.

As future lines of research, following the line of research concerning the effect of temporal dimensions on firms in decline in turnaround processes, other aspects regarding agency or the orchestration of processes of change issues could be delved into.

Regarding agency factors, there is no doubt that these significantly affect decision-making during the restructuring process. The main change of the management is usually one of the most common decisions in these circumstances. To study the impact of this rate of change is an interesting line of research to provide decision parameters when these processes are given.

Another possible aspect to investigate is the concept orchestration in the retrenchment stage. In a firm, the resources do not usually themselves guarantee the development of competitive advantages. These are only achieved when resources are managed efficiently. Resource management and synchronization are included in the turnaround process, and therefore it is anticipated that they will be key in the retrenchment stage, since a firm in decline must conserve its resources in order to survive. The sequence in terms of timing and speed (orchestration) of retrenchment in assets and costs can cause a

significant difference in the performance of companies in these processes, making it another interesting line of research to follow.

Figures and tables:

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SIXTH CHAPTER:

SPANISH SUMMARY

6.1. Antecedentes

Durante los últimos años, la crisis económica global ha llevado a las empresas a cambiar la forma de competir en un entorno cada vez más complejo y turbulento. Este entorno competitivo ha cambiado sustancialmente durante la última década y más especialmente para las empresas ubicadas en los países desarrollados. Anteriormente, las empresas situadas en estos países estuvieron orientadas a alcanzar una posición competitiva mediante el desarrollo de ventajas competitivas en un mundo en constante crecimiento.

En estos años, los cambios experimentados en el entorno empresarial han dado lugar a una mayor competencia, obligando a las empresas a desarrollar capacidades para manejar sus recursos como nunca antes. La globalización y el aumento de la competitividad en todos los sectores han traído oportunidades y amenazas y las empresas deben aprender a enfrentarse a ellas. El mundo de los negocios ha tenido que cambiar su forma de pensar y actuar para adaptarse a estas nuevas condiciones, ya sea para seguir siendo competitivos o simplemente para sobrevivir. Por definición, el horizonte temporal de cualquier empresa es indefinido y uno de sus principales objetivos es sobrevivir en el entorno en el que opera. Con la crisis en los últimos años ha habido muchos cierres y fracasos de las empresas, lo que ha obligado a las mismas y a sus directivos, no sólo conocer el manejo de las organizaciones en tiempos de prosperidad y crecimiento, sino

también hacer frente a los períodos de declive. Las acciones llevadas a cabo por los directivos durante los períodos de declive son cruciales para el futuro de las empresas. Investigaciones anteriores han demostrado que, en cualquier momento, las empresas pueden necesitar algún tipo de reestructuración para hacer frente al proceso de declive. Durante este proceso, las empresas llevan a cabo estrategias orientadas a revertir la situación negativa que se arrastra desde el comienzo del declive, centrándose en ciertas acciones que les permitan continuar su actividad y superar la situación. Esto es importante porque, dependiendo de cómo se ejecuten estas estrategias, implicará la supervivencia o la liquidación de la empresa.

6.2. Declive y reestructuración

El fracaso empresarial por lo general viene precedido de una fase de declive, en el que las empresas pierden su ventaja competitiva como resultado de factores internos (falta de competencias de gestión, conflictos internos, rigideces organizativas, etc.) y externos (recesión económica, obsolescencia tecnológica, etc.) (Pearce II et al., 2008). El declive no sólo se produce por años de desaceleración gradual, sino también por un corto periodo de tiempo de caída precipitada (Schendel y Patton, 1976).

El concepto de reestructuración es un fenómeno que se da cuando una empresa padece una situación en la que va disminuido su rendimiento financiero durante varios años seguido de un período de

crecimiento (Zammuto y Cameron, 1985). La reestructuración supone el establecimiento de un proceso explícito o implícito en el que se lleva a cabo una serie de actividades orientadas a transformar el proceso de declive en periodos de crecimiento o rentabilidad (Di Primio, 1988).

En los noventa, Pearce II y Robbins (1993; 1994a; 1994b) desarrollaron una conceptualización del proceso de reestructuración a través de dos etapas, que ha venido siendo aceptada por la literatura como un trabajo seminal. El modelo de Pearce y Robbins describe dos etapas en la reestructuración de la empresa: la etapa de retranqueamiento y la etapa de recuperación. En la etapa de retranqueamiento se busca la supervivencia de la empresa y el logro de un flujo de caja positivo con el fin de estabilizar la empresa para proporcionar holgura de recursos financieros y consolidar la situación. En la segunda etapa, denominada etapa de recuperación, la empresa cambia de objetivos. En esta fase la empresa busca el crecimiento y desarrollo, mediante la compra de activos, lanzamiento de nuevos productos, entrada en nuevos mercados o una mayor penetración en el mercado presente.

Pearce y Robbins (1993) observaron que las empresas en declive experimentan uno de los tres siguientes resultados en los años siguientes al proceso de reestructuración:

1. Empresas liquidadas o con rendimiento inferior. Empresas que fallaron en su intento de revertir la situación de declive y tuvieron que cerrar o mantuvieron rendimientos inferiores durante un periodo prolongado.

2. Empresas que lograron una mejoría en el rendimiento, pero nunca fueron capaces de recuperar su nivel anterior a la crisis.

3. Empresas que se recuperaron e igualaron o incluso superaron sus periodos más prósperos de rendimiento antes de la crisis.

Los casos segundo y tercero suponen considerar como éxito un proceso de reestructuración.

6.3. Retranqueamiento

Como se describe en la sección anterior, Pearce II y Robbins (1993) propusieron un modelo de dos etapas en los procesos de reestructuración. La etapa de retranqueamiento, que tiene por objetivo eliminar o reducir los costos o activos con el fin de asegurar la supervivencia de las empresas (Lim et al, 2013;.Pearce II y Robbins, 1993; Trahms et al, 2013).. En la segunda etapa, la etapa de recuperación, las empresas buscan cambios para transformar y cambiar la posición de la empresa con el objetivo de crecimiento y rentabilidad (Barker III y Duhaime, 1997; Pearce II y Robbins, 1993; Schmitt y Raisch, 2013).

Nuestra investigación se centra en el estudio de la etapa de retranqueamiento por dos razones. En primer lugar, las acciones llevadas a cabo en esta fase, son críticos para las empresas en declive,

puesto que su objetivo es la supervivencia (Il Pearce y Robbins, 1993). En segundo lugar, ya que el objetivo es la supervivencia empresarial, la etapa de retranqueamiento tiende a ser un período de cambio intenso en el que las decisiones se toman de forma más radical.

Hay un conjunto de acciones que en períodos de declive se llevan a cabo en la etapa de retranqueamiento. Estas actividades se refieren a los relacionados con la reducción de costes o de activos (O'Neill, 1986). La reducción de costes implica reducir los costes de la empresa y se centra principalmente en la cuenta de resultados de la empresa. La reducción de activos se centra principalmente en el balance de la empresa. La gravedad de la situación financiera influye en la elección de las acciones que la empresa debe llevar a cabo. Empresas bajo situaciones graves, como peligro de quiebra, pueden llegar a alcanzar la estabilidad principalmente a través de la reducción de los activos. Sin embargo, las empresas en situaciones menos graves simplemente requieren tareas tales como la reducción de costes, al ser esta menos drástica que la reducción de los activos. Algunos autores como Hambrick y Schecter (1983) y O'Neill (1986) muestran que la reducción de costos y activos es suficiente en determinadas circunstancias para restablecer la viabilidad a largo plazo de la empresa.

Las causas del declive de una empresa pueden ser debido a una contracción en el sector en general o una mala alineación de la

compañía a este (Cameron et al., 1987), así mejorar la posición competitiva de una empresa en situación de declive, es crucial para decidir la estrategia más adecuada y efectiva recuperación (O'Neill, 1986). Hay que tener en cuenta que no todas las empresas en declive tienen posiciones competitivas débiles, incluso las empresas más fuertes pueden entrar en declive debido a la contracción en el sector.

La literatura de reestructuraciones ha estudiado en profundidad si las actividades de retranqueamiento llevan a conclusiones contradictorias (Robbins y Pierce, 1992; Barker y Mone, 1994). Sobre esta base, la literatura ha optado por un enfoque contingente (Morrow et al, 2000; Lim et al, 2013). Uno de los factores que tiene más potencial para avanzar en el estudio de las reestructuraciones y el retranqueamiento es el tiempo. La literatura está repleta de referencias a la importancia del tiempo, sin embargo, hay un vacío de estudios empíricos sobre este factor.

6.4. Dimensiones temporales

La literatura de reestructuraciones ha reconocido unánimemente que la variable tiempo es crítica para la supervivencia de las empresas (Arogyaswamy et al., 1995; Hambrick, 1985; Pearce II et al., 1993), y por tanto "el tiempo es esencial para las reestructuraciones" (Slatter et al., 2006: pp. 9; Whitney, 1987: pp 120). El tiempo es especialmente importante durante la etapa de retranqueamiento, la primera etapa de una reestructuración, y las acciones llevadas a cabo en ella (Pearce II

et al., 1993; Tangpong et al., 2015). La etapa de retranqueamiento y el valor de las actividades de retranqueamiento es un tema muy controvertido debido a que el apoyo empírico ha sido inconsistente (Barker et al., 1994; Pearce II et al., 1993). La literatura ha estudiado factores contingentes relativos a estas actividades con el fin de arrojar luz sobre dichas inconsistencias (Lim et al., 2013; Ndofor et al, 2013). El tiempo es uno más de estos factores contingentes, sin embargo, su importancia e impacto son vitales (Tangpong et al., 2015).

El estudio de los patrones generales de cambio requiere un enfoque en el contexto temporal (George y Jones, 2000; Pettigrew, 1990). Las dimensiones temporales de cambio principalmente estudiadas en la literatura de cambio son la temporaneidad (timing), la velocidad (speed) y el ritmo (rhythm) (Ancona, Goodman, et al, 2001; Huy, 2001). Estas dimensiones temporales han sido el centro de estudio en una amplia gama de áreas, tales como la internacionalización, las fusiones y adquisiciones, el desarrollo de productos, la creación de nuevas empresas, etc. (Vermeulen et al., 2002; Bauer y Mätzler, 2014; Atuahene-Gima, 2003; Klarner et al., 2013; Gersick, 1994; Amis et al, 2004; Pacheco-de-Almeida et al, 2014). Estas tres dimensiones temporales del cambio también son sugeridas como críticas en el contexto de los procesos de reestructuración (Arogiaswamy, 1995; Pearce et al., 1992; Hofer, 1980). A continuación describimos estas tres dimensiones temporales:

a) Temporaneidad

La temporaneidad se define como "cuando algo se debe hacer" (Huy, 2001: pp. 604), es decir, el momento en que ocurre un evento o está previsto que ocurra o "cuando algo debe ser hecho" (Huy, 2001) marcando el inicio de éste. Los eventos representan sucesos discretos y discontinuos que divergen de las funciones rutinarias de la organización (Morgeson et al., 2015) y pueden ser estudiados de forma aislada o bien como causantes de otros, en una cadena de eventos (Morgeson et al., 2015). En el contexto de empresas en declive en procesos de reestructuración, la temporaneidad del retranqueamiento supone en qué momento debe el proceso de retranqueamiento ser iniciado. La temporaneidad del proceso de retranqueamiento puede ser temprano o tardía. La literatura sugiere que un inicio temprano de la etapa de retranqueamiento aumenta el rendimiento y las posibilidades de supervivencia de la empresa en crisis.

b) Velocidad de cambio

En segundo lugar, la velocidad puede ser definida como la cantidad de tiempo que una empresa tarda para completar una acción o un proceso (Chen et al., 1995; Vermeulen et al., 2002). La velocidad se ha utilizado para cuantificar la cantidad de tiempo empleado en una acción específica, tal como la velocidad de respuesta a un competidor, o en un proceso específico, como la velocidad de la renovación estratégica (Volberda et al., 2001) o la

velocidad de internacionalización (Vermeulen et al., 2002). Esta perspectiva de proceso de la velocidad se ha utilizado en la literatura para definir la velocidad de retranqueamiento como "la longevidad del proceso de retranqueamiento" (Pearce II et al., 1993: pp. 633). Una empresa en declive puede someterse a un proceso de retranqueamiento rápido o lento. Si dicho proceso es rápido, las reducciones de costes o activos se llevarán de manera ágil y viceversa. La literatura sugiere que los procesos de retranqueamiento deben ser rápidos (Arogyaswamy 1995; Pearce et al., 1992).

c) Ritmo

El ritmo se define como el patrón de variabilidad en la intensidad y frecuencia del cambio (Amis, Slack y Hinings, 2004). El ritmo de procesos de cambio puede ser irregular, caracterizado por periodos de significativa aplicación de cambio, que producen sobrecarga de información (picos de cambio). El ritmo también puede ser regular, en el que se combinan periodos de cambio de aplicación uniforme y de intensidad similar a lo largo del tiempo (Klarner et al., 2013; Vermeulen et al., 2002).

Una empresa que sigue un ritmo irregular en el proceso de retranqueamiento ejecutará medidas de manera desigual y con una intensidad diferente durante el período de los mismos (Huy, 2001; Vermeulen et al. 2002). Por el contrario, un proceso de retranqueamiento regular ejecutará medidas con una intensidad

uniforme sobre el período de retranqueamiento (Huy, 2001; Vermeulen et al., 2002). No existe en la literatura prácticamente mención sobre el ritmo que debe seguir una empresa en declive.

6.5. Factores contingentes: entorno, grado de deterioro financiero y agresividad

Entorno

El entorno puede tener un impacto significativo en el desempeño de las empresas rentables (Zahra y Bogner, 2000) y de las empresas en dificultades (Boyne y Meier, 2009; Cameron et al, 1987). A medida que el entorno se vuelve más agresivo (D'Aveni et al, 2010), el estudio de sus efectos se vuelve más importante. Las dos dimensiones más estudiadas del entorno son el dinamismo y la munificencia.

El dinamismo representa la tasa de cambio, el grado de imprevisibilidad y la turbulencia en el entorno (Dess y Beard, 1984; Farjoun, 2010). Los directivos en entornos dinámicos se enfrentan a la falta de información, a la imprevisibilidad y a la incertidumbre. Un entorno dinámico reduce la probabilidad de supervivencia de las empresas porque las empresas tienen dificultades para predecir las circunstancias que pueden afectar a las operaciones. Además, la fluctuación de la demanda en un entorno dinámico aumenta la dificultad de la gestión organizativa (Mellahi y Wilkinson, 2004). Munificencia es el grado en el que el entorno empresarial puede

soportar una tasa sostenida de crecimiento (Aragón-Correa y Sharma, 2003). En entornos munificentes hay una abundancia de los recursos necesarios para operar (Castrogiovanni, 1991). Por ello, los entornos munificentes son favorables a las empresas en crisis.

A las condiciones del entorno no se le han prestado la atención necesaria en los estudios de reestructuración. Muy pocos estudios empíricos de reestructuraciones han investigado este tema (Boyne y Meier, 2009; Ndofor, 2013). Las condiciones de entorno son importantes para los resultados de una reestructuración (Zimmerman, 1991).

Las perspectivas de espiral descendente y de la amenaza-rigidez facilitan argumentos que nos permiten acercarnos a cuál es el efecto del entorno en la relación del tiempo de retranqueamiento sobre el rendimiento. Por último, la importancia del efecto interactivo del entorno deriva de su relación con lo que algunos autores consideran como uno de los factores más contingentes en el estudio del éxito en la reestructuración: las causas del declive (Arogyaswamy et al., 1995). Las causas del declive se dividen en causas internas y externas (Arogyaswamy et al, 1995; Schmitt y Raisch, 2013; Weitzel y Jonsson, 1989). Las causas internas son las causas relacionadas con la propia empresa que conducen a una disminución del rendimiento. Las causas externas son las causas relacionadas con el entorno de la empresa entendido de manera amplia (Arogyaswamy et al., 1995). El éxito en el declive de las empresas originado por causas externas es menos

probable que el originado por causas internas (Hopkins y Hopkins, 2006; Shein, 2013). El motivo es que la supervivencia por causas externas requiere de un cambio en el entorno o bien un cambio radical en la estrategia de la firma (Arogyaswamy et al, 1995). Un entorno dinámico es un entorno adverso, mientras que un entorno munificente es un entorno favorable. Por ello, parece necesario que las decisiones temporales en los procesos de retranqueamiento se adapten al tipo de entorno.

Grado de deterioro

Existe una divergencia entre la literatura de cambio y la literatura de reestructuraciones sobre el modo en que debe producirse el cambio en las organizaciones. La literatura de reestructuraciones argumenta, sin que exista evidencia, que los cambios en la empresa en declive deben producirse de manera rápida, especialmente durante los procesos de retranqueamiento (Arogyaswamy, 1995; Hofer, 1980). La perspectiva de la espiral descendente describe como el declive supone un proceso paulatino y sostenido de erosión de los recursos. Por tanto, cuanto más rápido se produzca el proceso de cambio, menor será la erosión de los recursos (Hambrick, D´Aveni, 1988). Por el contrario, la literatura de cambio establece que una velocidad de cambio excesiva puede provocar el colapso de la organización (Huy, 2001; Klarner et al., 2013). Esta literatura argumenta y muestra evidencia de que un ritmo de cambio regular lleva a las empresas a rendimientos superiores. Ello es

debido a que mediante un ritmo de cambio regular las empresas evitan la sobrecarga de información y reducen las deseconomías de aprendizaje (Amis et al., 2004, Klarner et al., 2013).

En resumen, nos encontramos que ambas literaturas ofrecen puntos de vista opuestos. El objetivo de nuestro estudio es arrojar luz sobre estos distintos puntos de vista al profundizar en la velocidad y el ritmo de cambio en un entorno de reestructuración. En nuestra investigación, postulamos que la relación entre el rendimiento de la empresa y el ritmo de retranqueamiento está supeditada al grado de deterioro de la empresa.

Se argumenta que, en situaciones de bajo nivel de deterioro, las empresas en declive deberán seguir un ritmo de retranqueamiento regular ya que ello permite a la empresa reducir la sobrecarga de información y aumentar el aprendizaje de la misma (Klarner et al., 2013; Amis et al., 2004).

Sin embargo, en situaciones de alto grado de deterioro, dado el inminente riesgo de fracaso, una baja velocidad de cambio es algo que la organización no puede permitirse, dado que el proceso de espiral descendente continuará erosionando los recursos de la empresa. Dado que la organización sufre un alto grado de deterioro, una mayor erosión de recursos hundirá la organización. Por lo tanto, en caso de altos niveles de deterioro, las empresas tendrán que actuar rápido para acortar el período de declive y evitar períodos de inactividad que son

períodos de erosión de recursos (Hambrick et al., 1988). En este tipo de situación, el retranqueamiento deberá de llevarse a cabo de manera rápida.

Agresividad

La literatura de reestructuraciones se encuentra llena de menciones explícitas a la necesidad de introducir la agresividad en los procesos de reestructuración (Hofer, 1980; Pearce et al., 2008; Pearce et al., 1992). Sin embargo, no existe ningún estudio sobre la agresividad en dichos procesos y desconocemos por tanto como de agresivos tienen que ser los directivos que se enfrentan a una crisis.

La agresividad ha sido estudiada en áreas como la innovación o la dinámica competitiva (Smith, et al., 2001; Ferrier, et al., 1999). Se considera que una empresa "actúa de manera agresiva cuando toma rápidamente un número elevado de acciones" (Chen et al., 2010: pp. 1410). Por tanto, se conceptualiza entonces la agresividad como la propensión directa sobre acciones, en términos de volumen y velocidad, de un proceso de cambio (Nadkarni et al, 2016; Chen et al., 2010; Ferrier, et al., 1999), como el retranqueamiento ante el declive en una situación de reestructuración. Una empresa se dice que tiene por tanto un alto grado de agresividad en el proceso de retranqueamiento, si lleva a cabo un elevado grado de retranqueamiento (volumen) o realiza este de manera temprana o rápida (tiempo). Así, las empresas

en declive pueden mostrarse agresivas tanto en volumen como en tiempo.

El tema más controvertido en la literatura de reestructuraciones es si la profundidad en los recortes afecta positivamente al rendimiento de la empresa (Barker III et al., 1994; Pearce II et al., 1993). Este tema se abordará desde la perspectiva de la agresividad para estudiar si la agresividad en tiempo tiene que ver con la variabilidad de los resultados en la agresividad en volumen. Se estudiará los efectos de la agresividad en el tiempo y la agresividad en volumen en el rendimiento y si la agresividad en volumen media o modera a la agresividad en tiempo.

6.6. Marco Teórico

Para argumentar los efectos sobre el éxito en una reestructuración de las dimensiones temporales de retranqueamiento se utilizan dos perspectivas, la corriente de espiral descendente (Hambricket al., 1992, 1988) y la corriente de la amenaza-rigidez (Staw et al., 1981). La primera se centra en el proceso de declive y sus efectos sobre la empresa, y la segunda en la respuesta por parte de la empresa al declive, por lo que ambos se complementan entre sí.

La corriente de espiral descendente es especialmente apropiada para nuestra investigación, debido a su naturaleza longitudinal y a la relación del modelo con la disponibilidad de recursos y con el entorno (Hambrick et al., 1988). La corriente postula que el declive es un proceso

prolongado durante el cual los recursos de la empresa tienden a deteriorarse, y que las empresas en declive tienen un período sustancial de advertencia antes de que se hundan (Hambrick et al., 1988). En el modelo, los recursos de la empresa tienen un papel fundamental. En primer lugar, las empresas en declive son más vulnerables en condiciones de baja holgura organizativa -slack- (Hambrick et al., 1988). Las organizaciones son acumuladoras de recursos y fracasan cuando los malos resultados erosionan estos (Levinthal, 1991). La acción sobre los recursos se convierte en clave en la supervivencia de la empresa en declive (Levinthal, 1991) y afecta a su capacidad para implementar un cambio con éxito (Barker III et al., 1997). En segundo lugar, el entorno juega un papel crítico en la supervivencia de la empresa en declive dado su papel como facilitador de recursos (Hambrick et al., 1988). La empresa seguirá existiendo mientras el entorno siga siendo munificente, ya que dicha bondad del entorno compensará la erosión de los recursos producida por el declive. En las etapas finales del proceso de espiral descendente, el entorno se convierte en dinámico. Sólo aquellas empresas que dispongan de holgura de recursos serán capaces de sobrevivir a este cambio en el entorno (Hambrick et al., 1988). Este cambio en el entorno (de entorno munificente a entorno dinámico), en combinación con un bajo nivel de holgura, agota todas las formas disponibles de recursos y, marca la desaparición de la empresa.

La perspectiva de amenaza-rigidez argumenta que una amenaza o crisis induce a los directivos a una rigidez y endurecimiento del control (Staw et al., 1981). El proceso se inicia cuando los resultados de la empresa caen, originando estrés y ansiedad en la gestión. El estrés de los gestores produce principalmente dos respuestas organizativas (Arogyaswamy et al., 1995; Cameron et al., 1987; Staw et al., 1981). En primer lugar, los gerentes aumentan la búsqueda de información, lo cual resulta en una sobrecarga de la misma, lo que reduce su capacidad para procesar dicha información. En segundo lugar, los directivos aumentan el grado de control y se desplazan hacia estructuras y procesos de toma de decisión de tipo mecanicistas. Finalmente, Staw et al. (1981) sostienen que, el grado de disfuncionalidad de estas dos respuestas depende de las condiciones en las que se produzcan.

6.7. Metodología muestras y variables

La literatura ha observado que la selección de una muestra apropiada es muy importante para el estudio de reestructuraciones. Con el fin de excluir a las empresas pequeñas y medianas empresas, se seleccionaron sólo aquellas empresas con más de 500 empleados. Además, se seleccionaron las empresas no diversificadas, con al menos el 70 % de sus ingresos en su SIC primario de tres dígitos. Tampoco se incluyen empresas financieras dado que introducirían sesgo en las

muestras. La metodología, muestras y variables utilizadas en los diferentes estudios pueden describirse en las siguientes tablas:

Tabla 1

Metodología

	Segundo capítulo (Paper I)	Tercer capítulo (Paper II)	Cuarto capítulo (Paper II)
Técnica de análisis de datos	FGLS (Fensible Generalized Least Savers), con pool de corte transversal	OLS (logistic regression), con pool de corte transversal	OLS (logistic regression), con pool de corte transversal
Sesgo de selección	ANOVA	Procedimiento Heckprob	Procedimiento Heckprob
Sesgo de supervivencia	------	Elección variable dependiente y procedimiento de matching por parejas	Elección variable dependiente y procedimiento de matching por parejas
Otros	Reverse code en variables dependientes. Test de robustez	Test de robustez	Reverse code en variables dependientes. Test de robustez

Tabla 2

Muestras

	Segundo capítulo (Paper I)	Tercer capítulo (Paper II)	Cuarto capítulo (Paper II)
Items (individuos)	263 (Empresas americanas en declive en procesos de reestructuración). Implementan medidas de retranqueamiento (activos y/o costes)	84 (Empresas americanas en declive en procesos de reestructuración). Implementan medidas de retranqueamiento (activos y/o costes). Las empresas pertenecen al índice Standars and Poor´s 1500	264 (Empresas americanas en declive en procesos de reestructuración). Implementan medidas de retranqueamiento (activos y/o costes)
Periodo	1979-2007 (periodo de expansión y de recesión)	1995-2008 (periodo de expansión y de recesión)	1990-2007 (periodos de expansión y de recesión)
Códigos US SIC	2000-3999	Todos los sectores	2000-3999
BBDD	Compustat	Compustat (datos financieros), US SEC(Edgar) / Datastream (Factores de agencia)	Compustat (datos financieros), US SEC (Edgar) / Datastream (Factores de agencia)

Tabla 3

Variables

	Segundo capítulo (Paper I)	Tercer capítulo (Paper II)	Cuarto capítulo (Paper II)
Variables dependientes	Tobin´s Q (t+3)	Supervivencia empresarial o éxito del proceso de reestructuración. Rendimiento reestructuración (Dicotómica)	Supervivencia empresarial o éxito del proceso de reestructuración. Rendimiento reestructuración (Dicotómica)
Variables dependientes y moderadoras	Munificencia Dinamismo Retranqueamiento Temporización Velocidad Ritmo	Velocidad de retranqueamiento Ritmo de retranqueamiento Grado de deterioro financiero (Altman´s Z)	Agresividad temporal Agresividad en volumen
Variables de control	Liquidez Apalancamiento Tamaño (empleados) Altman´s Z Causas Internas de declive Dummies temporales Dummies cíclicas	Cambio de CEO Edad Crecimiento ROA industria Intensidad en R&D Lambda Dummies temporales	Altman´s Z Tamaño (empleados) Intensidad de capital Edad Cambio de CEO Tamaño Consejo de Administración Causas de declive Lambda Dummies temporales

El software de análisis de datos utilizado ha sido Stata V12.

6.8. Cuestiones de investigación y contribuciones

La literatura ha reconocido unánimemente que las dimensiones temporales son clave para la supervivencia y mejora del rendimiento de las empresas en procesos de cambio. Las dimensiones temporales son un tema complejo, sobre todo en situaciones de transformación crítica de empresas en declive en procesos de reestructuración. A pesar de la importancia del tema de estudio ha sido escaso el testeo empírico por parte de la literatura en estos procesos, siendo muy incipiente su investigación. En general, en la literatura de gestión son pocos los estudios que tratan de forma integral las diferentes dimensiones temporales. La conjunción de estos cuerpos de literatura entre sí por tanto permite explorar esta vía de investigación en la que está basada esta Tesis Doctoral, y pretende ser un hilo de desarrollo de la literatura.

La disertación trata de responder a las siguientes generales preguntas de investigación:

- ¿Cómo afectan sobre el rendimiento, éxito o supervivencia de empresas en declive, las dimensiones temporales de retranqueamiento, al interactuar con el entorno y el grado de deterioro de la empresa?
- ¿Cómo afecta la agresividad en tiempo y en volumen del retranqueamiento en el rendimiento, éxito o supervivencia de las empresas en declive?

El objetivo por tanto es establecer modelos de relaciones causales, su dirección y su magnitud del efecto de dimensiones temporales de tiempo, velocidad y ritmo para la mejora de rendimiento o supervivencia de empresas en declive en procesos de reestructuración, en su interacción con el entorno y con el grado de deterioro de la empresa. Asimismo, establecer relación causal entre los dos tipos de agresividad (tiempo y volumen) y el rendimiento de la empresa. En base a estas tres cuestiones nosotros desarrollamos tres estudios:

El primer estudio se focaliza en examinar tres dimensiones de tiempo (temporización, velocidad y ritmo) en la etapa de retranqueamiento, para basándonos en la teoría de la espiral descendente y en la de amenaza rigidez analizar que los efectos de estas tres dimensiones sobre el rendimiento en un proceso de reestructuración son altamente contingentes con el entorno descrito en términos de munificencia y dinamismo. Las hipótesis planteadas como contribución son:

Hipótesis 1a: El dinamismo del entorno modera positivamente la relación entre un momento temprano de recortes y los resultados de la empresa.

Hipótesis 1b: La munificencia del entorno modera positivamente la relación entre un momento temprano de recortes y los resultados de la empresa.

Hipótesis 2a: El dinamismo del entorno modera positivamente la relación entre la velocidad de recortes y los resultados de la empresa

Hipótesis 2b: La munificencia del entorno modera positivamente la relación entre la velocidad de recortes y los resultados de la empresa.

Hipótesis 3a1: El dinamismo del entorno modera positivamente la relación entre un ritmo irregular de recortes y los resultados de la empresa.

Hipótesis 3a2: El dinamismo del entorno modera positivamente la relación entre un ritmo regular de recortes y los resultados de la empresa.

Hipótesis 3b: La munificencia del entorno modera positivamente la relación entre un ritmo irregular de recortes y el rendimiento de la empresa.

En el segundo estudio analizamos la influencia de un correcto paso de cambio en el retranqueamiento en un contexto de reestructuración moderado por el grado de deterioro de la empresa. Las hipótesis planteadas como contribución son:

Hipótesis 4: El grado de deterioro empresarial modera la relación entre la velocidad del proceso de retranqueamiento y el rendimiento, de tal modo que un proceso rápido de retranqueamiento tendrá un efecto positivo en el rendimiento cuanto mayor sea el grado de deterioro.

Hipótesis 5: El grado de deterioro empresarial modera la relación entre el ritmo del proceso de retranqueamiento y el rendimiento, de tal modo que un proceso regular de retranqueamiento tendrá un efecto positivo en el rendimiento cuanto menor sea el grado de deterioro.

Finalmente nuestro tercer estudio define y testea el concepto de agresividad de retranqueamiento, en términos de tiempo y volumen,

para evaluar el efecto sobre el rendimiento en los procesos de reestructuración, así como el efecto mediador entre ambos. Las hipótesis planteadas como contribución son:

Hipótesis 6: Una mayor agresividad temporal de retranqueamiento está positivamente relacionada con el rendimiento de la empresa en una reestructuración.

Hipótesis 7: Una mayor agresividad temporal de retranqueamiento está negativamente relacionada con el rendimiento de la empresa en una reestructuración.

Hipótesis 8: La agresividad en volumen media la relación entre la agresividad en tiempo y el rendimiento de la empresa en una reestructuración

Por tanto este proyecto presenta 12 hipótesis para dar respuesta a las dos preguntas de investigación planteadas. Se enlazan entre sí teniendo como piedra angular el efecto de las dimensiones temporales en los procesos de reestructuración.

6.9. Estructura

Esta Tesis se estructura como sigue. En el capítulo 1, tras el abstract global, se desarrolla la Introducción, donde se resumen los aspectos clave que configuran el documento. En los capítulos 2, 3 y 4, se presentan los tres estudios que nosotros hemos descrito. El capitulo 2 presenta el estudio titulado "**DIMENSIONES TEMPORALES DE CAMBIO y CONDICIONES DE ENTORNO EN REESTRUCTURACIONES EMPRESARIALES**". En el capítulo 3, se desarrolla el segundo estudio titulado "**DETERIORO**

EMPRESARIAL Y PASO DE CAMBIO EN LOS PROCESOS DE REESTRUCTURACIÓN". Finalmente en el capítulo 4, se analiza el estudio titulado "**¿DEBERÍAN LAS EMPRESAS EN DECLIVE SER AGRESIVAS DURANTE EL PROCESO DE RETRANQUEAMIENTO?**". Cada uno de estos capítulos incluye diferentes secciones: introducción, hipótesis, metodología y conclusiones (resultados, discusiones y limitaciones). Cierra el trabajo el capítulo 5, donde se describen el resumen y las conclusiones, contribuciones, limitaciones y futuras líneas de investigación a raíz de este trabajo. Cada capítulo cuenta con sus correspondientes referencias bibliográficas.